Public Utilities

FORTNIGHTLY

Volume XLIX No. 3 January 31, 1952

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

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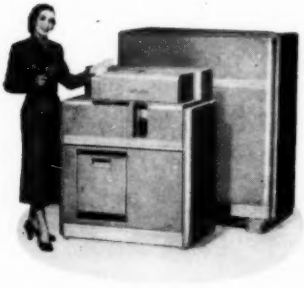
Payrolls computed in minutes . . . bills calculated with the speed of light . . . complex engineering problems solved faster than the problems can be stated.

This is only a sample of the power put in your hands by the pluggable IBM Electronic Tube Assembly, the heart of the IBM Electronic Calculator. Here is power to do simple and complex calculation without the need for supervision of step-by-step operation . . . power to free men's minds from the burden of detail computation and to eliminate frequent human error.



IBM

INTERNATIONAL BUSINESS MACHINE
590 Madison Avenue, New York 22, N.Y

Public Utilities FORTNIGHTLY

VOLUME XLIX JANUARY 31, 1952 NUMBER 3

ARTICLES

FEATURE SECTIONS

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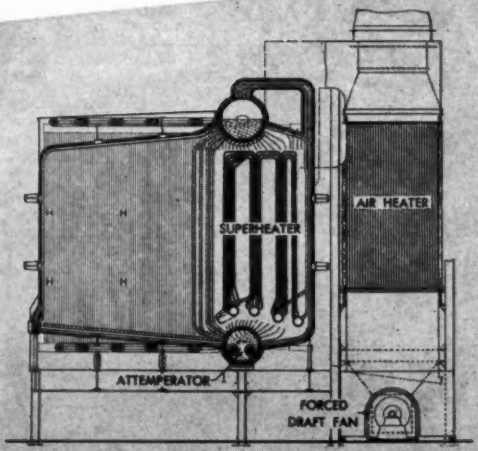


B&W Integral-Furnace Boiler, Type FH, with pressurized casing, now in successful operation in outdoor central station installation. Design capacity is 300,000 lb. of steam per hr. at 875 psi and 910 F with gas-firing.

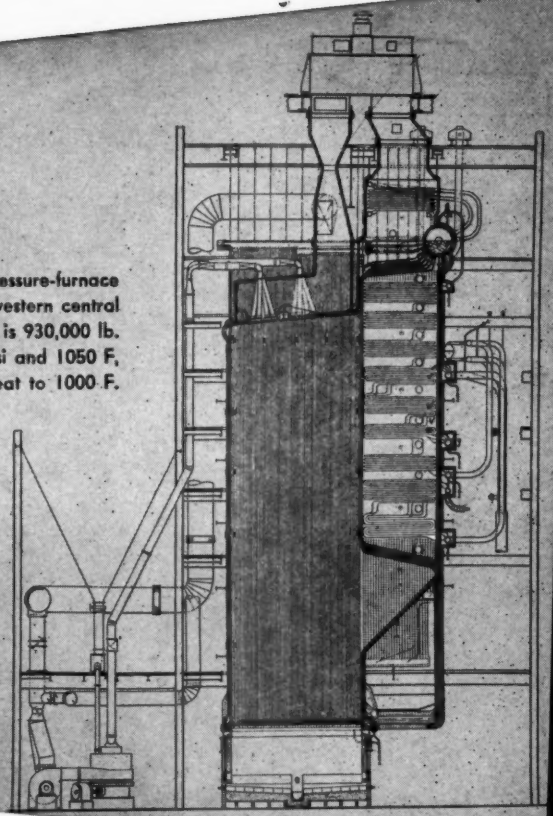
PRESSURIZED

FOR NEW ECONOMIES

Demand charge for Induced-Draft fan capacity may run as high as one-half of one per cent of gross generating capacity . . . an appreciable expense to any central station. Maintenance, too, is excessive because of constant exposure to hot gases and entrained abrasive particles.

These reasons help explain the importance of B&W's latest development —pressurized furnace construction. ID fans can be eliminated and users assured of the four big advantages listed on the opposite page.

A creative approach to boiler design and application, working in close co-operation with far-sighted managements and power engineers, has identified B&W with steam-power progress for more than 80 years. Perhaps it's just what is needed to effect significant steam-generating economies in the solution of *your* present problems or future plans.



B&W Radiant Boiler of pressure-furnace design now serving in mid-western central station. Design capacity is 930,000 lb. of steam per hr. at 2300 psi and 1050 F, with reheat to 1000 F.

Another Example of B&W Engineering for Economy

...proved principle of boiler-furnace operation pioneered by B&W

...OFFERS MAJOR COST SAVING ADVANTAGES

1. **Eliminates ID fan — lowers demand charge.**
2. **Prevents air infiltration — provides higher boiler efficiency.**
3. **Simplifies draft control — permits quick, easy, effective adjustment to optimum combustion conditions at all loads.**
4. **Simplifies design — lowers initial cost of duct and stack arrangement.**

Helping Industry Cut Steam Costs Since 1867

BABCOCK & WILCOX

Pages with the Editors

WAGE regulation, or to use the present-day euphemism "wage stabilization," has a long history indeed. From the time of the Egyptian Pharaohs through the edicts of the Roman Emperors on army pay, we find recurrent references to the fixing of wages for services performed by labor.

ONE notable instance of wage "stabilization" in a very literal sense can be found in the Gospel of St. Matthew concerning the laborers in the vineyard who received the same pay no matter how many hours of the day they had worked. Of course, this scriptural message has taken on a symbolic interpretation, meaning that salvation is always open to everyone, regardless of their time of life. It is doubtful, however, if any such wage fixing arrangement would ever work in a practical economic sense.

BUT the idea that the economic concept of wages should also include fees paid to professional men is fairly recent. It is a broader use of the term than the definition of wages given by the great economic authority, Frances A. Walker, who said that wages were "the reward of those who are employed in production

JOSEPH D. COOPER

TITUS G. LECLAIR

with a view to the profit of their employers and are paid at stipulated rates."

WHEN the Economic Stabilization Agency last year came to grips with the duty imposed upon it by the Defense Production Act to "stabilize" wages in harmony with the stabilization of prices, the need of a workable distinction between organized workers and employees who bargain individually became apparent. Regulations of the Salary Stabilization Board generally follow the pattern of the Wage Stabilization Board.

HOW does salary stabilization affect professional employees of a public utility—staff engineers, "house" lawyers, accountants, and other professionals, even physicians? JOSEPH D. COOPER, executive director of the Salary Stabilization Board, whose interpretative article on this subject opens this issue, was born in Boston in 1917 and brought up in Brooklyn. He was educated in Washington at George Washington University (BS, '44) and American University (MA, '47; PhD, '51). He has been a career employee of the Federal government since the early thirties, starting his work in personnel relations with the

Department of Agriculture. During World War II he was with the old OPA, since then with the Department of State, from which he was appointed last year to his present post.

* * * *

Two articles in this issue deal with progress in the electric power industry since the pioneer days of Edison. They are appropriately included, in view of the fact that February 11th is the birthday of the great inventor genius, who fathered the industry.

TITUS G. LECLAIR, whose article on the progress of the electric power industry from a practical operating viewpoint begins on page 143, is chief electrical engineer of the Commonwealth Edison Company of Chicago. Born in Superior, Wisconsin, he graduated from the University of Idaho with a degree in electrical engineering in 1921. He has since been awarded an honorary degree of Doctor of Science ('51) by his Alma Mater. He is also a past president of the Western Society of Engineers and of the Illinois Engineering Council. He recently completed his term as president of the American Institute of Electrical Engineers, which is a fitting background for his summary of industrial progress in this issue. He has spent more than a quarter of a century in the electric field, and is the inventor of various devices used in the industry.

EDWARD DANA

A. BRYAN MARVIN

A. BRYAN MARVIN, whose article on "Precision Instruments in Utility Operation" begins on page 156, works with the press information and public relations bureau of Consolidated Edison Company of New York. Educated at St. Marks and Yale, MR. MARVIN found his way into the utility industry after two years' service as a newspaper reporter with the *Stamford* (Connecticut) *Advocate*.

* * * *

EDWARD DANA, whose article on "Selling the Story of Transit's Need" begins on page 153, is at present the general manager of the Metropolitan (Boston) Transit Authority. A native of Bernardston, Massachusetts, he was educated at Harvard (AB, '07) and started his career with the old Boston Elevated Railway in 1907, rising to the post of president and general manager (1937-47) when the post was absorbed by the Metropolitan Transit Authority. MR. DANA has also been exceedingly active in all phases of transit industry association work, banking, business, charitable, and patriotic and fraternal movements.

THE next number of this magazine will be out February 14th.

The Editors

ver equipment failures—less "down-time" ough SCHEDULED PREVENTIVE MAINTENANCE

If you'd like to read a case history that shows how "the other fellow" in your business is making big savings in caring for his expensive equipment—send today for free folder KD656.

Just off the press, this informative folder tells in detail the 20 years' experience of The Kansas Gas and Electric Co. with the Kardex preventive maintenance system designed for their Generating Department. They avoid expensive repairs with a simple system which flashes notice when inspections are needed in ample time for effective, economical action. Kardex is not only the simplest means of achieving this result, but the most unfailing. You *can't miss* the warning Kardex signals.

Don't take our word for it. Read the facts and judge for yourself what such a system could do for *your* equipment, *your* operating costs. Mail the coupon today.

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315 Fourth Ave., New York 10, N. Y.

Yes, I would like your booklet KD656.

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CITY_____ ZONE_____ STATE_____

Coming IN THE NEXT ISSUE

★

PIE IN THE SKY OVER NIAGARA. PART I.

Who is to blame for the delay in developing power in the Niagara area so much needed in New York state? Is the state of New York anxious to retain all benefits for the home market? Are the private companies trying to continue their territorial rights? Or is the Interior, for the Federal government, adopting a dog-in-the-manger attitude in refusing to let others go ahead? How does labor react to glowing promises of pie in the sky? These are questions analyzed in a record of the controversial Niagara situation by George W. Keith, professional writer of Cincinnati, Ohio.

FEDERAL COMMISSIONS—HOW MUCH INDEPENDENCE?

Since the very earliest days of regulatory commissions in the United States, the question of how much freedom of action they should enjoy has been a continuous and complicated question. Although distinct from each of the three constitutional branches of our government, the commissions nevertheless take on a trinity of attributes which the lawyers call quasi judicial, quasi legislative, and quasi administrative. Belonging to no category, the commission must nevertheless function along all three lines. C. S. Hyneman, professor at Northwestern University, discusses these basic issues of Federal commission operation.

LIGHT THE PATHWAY TO THE FUTURE

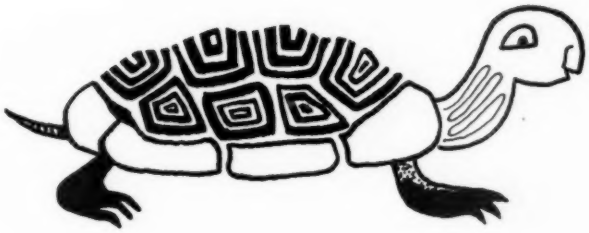
America is the land of individual expression, but if it were left to every individual to determine how much or how little or what kind of light were needed in his day-to-day operations, the American night scene might vary as widely as a flare lamp camp meeting contrasted with midnight at Times Square. Planned lighting by experts is not only an obvious necessity but the reasons behind it are more far-reaching than the nonexperts would ever suppose. H. A. Stroud, chairman, EEI home lighting education committee, as well as promotion manager, Monongahela Power Company, gives us an interesting article.

I WORK FOR A PUBLIC UTILITY

Here is a day in the life of a typical public utility employee. How did he ever get started that way? How does he like it now that he has started? What does he expect to get out of it? Is he satisfied that he is making progress towards his objective? Henry F. Unger, professional writer of Washington, D. C., has made an actual case study of a representative public utility employee's reaction in a round-the-clock X-ray of his behavior and motivation.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***



How old is he?

ALL tortoises are *not* the same age.

One may be a mere youth of 25.

Another may be nearing the century mark.

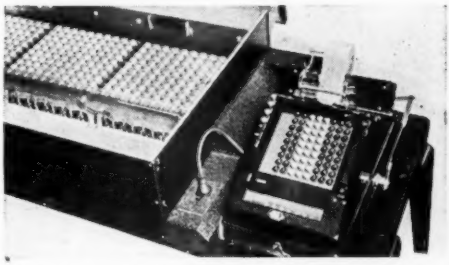
Tortoises are running around in a variety of age groups. Customers' bills vary numerically, too. Some run to much higher figures than others.

A helpful approach

In planning rate and promotional programs, it's most helpful to know, periodically, the number of customers' bills in *various* kilowatt-hour classifications.

Many utilities have such analyses prepared for them by the Recording and Statistical Corporation in its specially designed Bill Frequency Analyzer. This electric-mechanical equipment analyses as many as 200,000 bills each day, and the cost is less than if the work were done by a clerical force.

Would you like the facts about this economical method of compiling usage data? Then write today for "The One Step Method of Bill Analysis." We think you will find it very worthwhile.



This Bill Frequency Analyzer—developed especially for utility usage data—automatically classifies and adds in 300 registers—in one step!

RECORDING AND STATISTICAL CORPORATION

100 Sixth Avenue **New York 13, N. Y.**

Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

BEN MOREELL
President, Jones & Laughlin Steel Corporation.

"Let's stop this headlong rush toward more collectivism."

DECHARD A. HULCY
President, Chamber of Commerce of the United States.

"The American breed of Socialism has had to pull in its horns."

ARTHUR B. LANGLIE
Governor of Washington.

"Do not build a trap for the future. Deficit spending on the part of our government will lead to dictatorship and loss of our freedom."

JOHN W. CLINE
President, American Medical Association.

"It may not be easy to stop the progress toward Socialism, but it is far easier and more realistic to halt it than to try to eliminate it after it has become an accomplished fact."

C. G. KIRKBRIDE
Vice president, Houdry Process Corporation.

"The tax collector as well as labor are actually losing because of the shortsighted policies in a tax structure that discourages private investments in these new ventures."

HENRY H. HEIMANN
Executive vice president, National Association of Credit Men.

"Any government spending such vast sums as we will spend in 1952 would bring on a further spread of unethical and immoral practices. Historically it has always been so."

EDITORIAL STATEMENT
Chicago Tribune.

"One of the great delusions of bureaucrats is that they accomplish something for the people, although the people have not advertised any desire to have something done for them."

SIDNEY S. MCMATH
Governor of Arkansas.

"It is the duty of the states to keep their laws, rules, and regulations modern and up to date so as to take advantage of the newest technological developments in oil and gas production and conservation."

NEIL CAROTHERS
Dean emeritus, Lehigh University School of Business Administration.

"Our nation is menaced by three curses. The first is inordinate greed of groups. The second is economic ignorance on the top level and the third is political demagoguery which leads public figures to vote for measures they know are wrong."

EDITORIAL STATEMENT
The Wall Street Journal.

"Our labor leaders like to be called 'enlightened' and we are glad to say that some of them deserve that kudo. But their lights might very well be turned into some of the dark places in their own organizations."

BENJAMIN F. FAIRLESS
President, U. S. Steel Company.

"The practice of giving people more dollars that will buy less may fool them for a time, but eventually they must discover the truth; namely, that this country can't get wealthy and go broke at the same time."

WALTER WINCHELL
Radio commentator and columnist.

"In the battle of ideology, Communism has failed to convince the minds of free men, so now it must resort to force. Having lost its case against the enterprise system, Communism is now trying to destroy the evidence."

LELAND I. DOAN
President, Dow Chemical Company.

"We can't perpetuate our American business system or find new investors unless we show a profit. This is the only kind of economy that is truly anti-inflationary, and is the exact opposite of the Federal spending pattern."

G. ROWLAND COLLINS
Dean, New York University School of Business.

"We cannot fritter away our economic freedom without destroying our political freedoms. The several and various strands of liberty—economic, political, religious, social—are bound together. Weaken or destroy one and the entire rope will snap."

JOHN S. KNIGHT
Editor and publisher, Chicago Daily News.

"In the last twenty years we have drifted farther and farther from the revolutionary spirit which sparked our war for independence. Our intrepid forefathers rebelled against many of the practices which are today blithely accepted as evidence of our 'programs.'"

VAL PETERSON
Governor of Nebraska.

"People all over America have a haunting fear that this administration is going to tax and spend us into bankruptcy. The government must live within a budget, just like you and I must. We can't earn $75 a week and spend $100, just because we're young and strong."

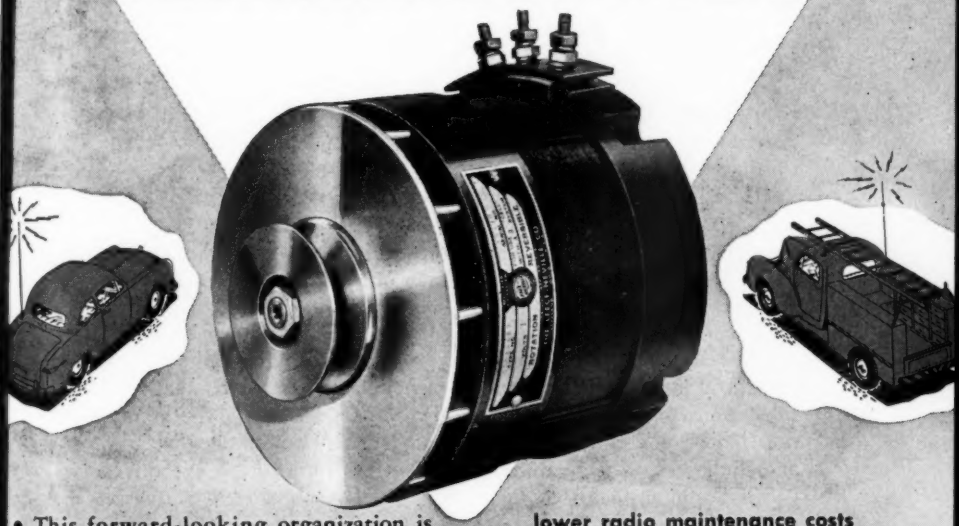
JOHN Q. MCADAMS
President, Winters State Bank, Winters, Texas.

"Who among us have expressed indignation over the birth of an array of Federal corporations subsidized by the Treasury, operating in competition with privately owned business enterprises financed with private capital, all subject to increasing regulations and a tax burden which often results in expressions of despair? Some members of the Congress with whom I have talked seem to think the people want a welfare state—their conclusions cannot be otherwise since their mail is overwhelmingly from the pressure groups making demands for more and larger gifts, doles, subsidies, tuitions, and unemployment benefits."

HYDRO ELECTRIC SYSTEM
City of Winnipeg, Canada

USES THE **Leece-Neville**

ALTERNATOR SYSTEM



• This forward-looking organization is another one of the many Public Utilities who enjoy the advantages of the L-N Alternator System.

On *your* two-way radio cars and trucks . . . or wherever current demands are high . . . the L-N Alternator System will give you:

25 to 35 amperes with engine idling
new freedom from battery troubles
longer battery life
lower radio maintenance costs
more consistent radio operation

There are L-N Alternator Systems rated at 50 amps. and 80 amps. for 6-volt systems; 60 to 150 amps. for 12-volt systems.

For all the facts, write The Leece-Neville Company, Cleveland 14, Ohio. Automotive Electric Equipment for Over 40 Years.

Distributors in principal cities . . . Service Stations everywhere.

THE LEECE-NEVILLE COMPANY — ELECTRICAL ENGINEERS — CLEVELAND, OHIO, U.S.A.

BE SURE TO SPECIFY LEECE-NEVILLE

Leece-Neville

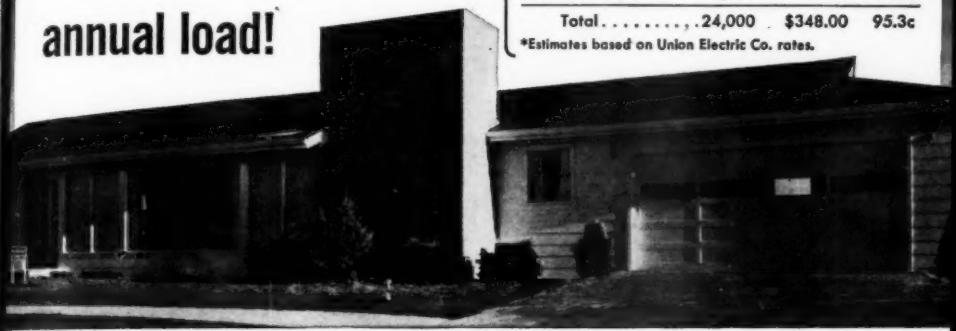
ALTERNATOR SYSTEMS • GENERATORS • STARTING MOTORS
REGULATORS • SWITCHES • FRACTIONAL HP MOTORS

TRUCK · BUS · DIESEL · OFF-HIGHWAY · PASSENGER · RAILROAD · MARINE · INDUSTR

"New World Home" sets pattern for 24,000 kw-hr annual load!

Use	Kwhr/Yr.	*Annual Cost	Daily Cost
Lighting, Misc. Appl.	1,200	$19.20	5.3c
Cooking	1,200	19.20	5.3c
Refrigeration	960	15.60	4.3c
Electric Sink	180	3.00	0.8c
Television, Radio	420	6.60	1.8c
Laundry	900	14.40	3.9c
Heat Pump	13,980	225.60	61.8c
Sub Total	18,840	$303.60	83.2c
Water Heaters	5,160	44.40	12.1c
Total	24,000	$348.00	95.3c

*Estimates based on Union Electric Co. rates.



DESIGN FOR ALL-ELECTRIC LIVING—St. Louis New World Home highlights latest electrical equipment, from remote control wiring to new heat pumps for year-round air conditioning.

"LIGHT CONDITIONING" of living room provides both excellent illumination and dramatic effects of wall-to-wall valance. Lammerts of St. Louis furnished modern, functional furniture.

Dollar a day for complete electric service compares with fuel, power costs for average home

With winter heating and summer cooling added to complete labor-saving electric equipment, what will tomorrow's consumer pay to operate an all-electric home? The question has already been answered in the New World Home, exhibited in St. Louis. This home will provide complete electrical service—including the operation of two 3-hp heat pumps—for less than $1 a day.

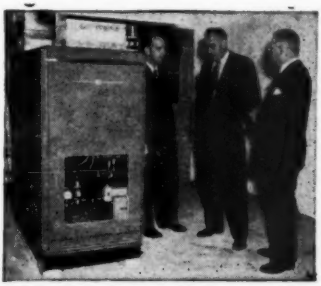
No impractical dream, here is a home that can be built now, with equipment already available. With an annual consumption of 24,000 kw-hr—more than 13 times the 1950 national residential average—it is an indication of the tremendous opportunities that lie ahead in residential load building. General Electric Company, Schenectady 5, N. Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-182G

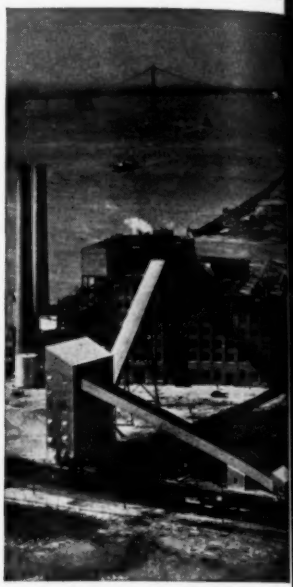
NOVEL FEATURE is soda-snack bar, being discussed by Miss Laura Alkire of Consumers' Institute, and J. R. Brownback, G-E Appliance Div. New World Home booklet is available from Union Electric Co., Rm 629, St. Louis, Mo.



MODEL YR-30 HEAT PUMP is a major load builder. Shown with heat pump are G. F. Maughmer (G. E.), Union Electric Co. President J. W. McAfee, and Residential Sales Manager R. L. Coe.

COMBINATION G.E. Kitchen and Laundry includes range, refrigerator, electric sink, Disposall, dishwasher, freezer, clothes washer, dryer, ironer.

One of two 60-cell, FME-17 Exide-Manchex Batteries providing emergency power in the Edgemoor Station.



Delaware Power & Light Co., new Edgemoor Generation Station, Wilmington, Delaware. Built by United Engineers & Constructors Inc.

DEPENDABLE POWER FOR THE DIAMOND STATE

Exide-Manchex BATTERIES

In the Delaware Power & Light Company's new Edgemoor Generation Station, near Wilmington, there are ninety-five 2.5 k.v. electrically operated circuit breakers, eight 12 k.v. pneumatically operated breakers, and a 5 k.w. inverter which supplies a.c. power for clocks, recording meters, and other instruments. And, in case of power failure, all this equipment operates efficiently and dependably on one of the two 60-cell FME-17 Exide-Manchex Batteries. The other battery provides for 9 500 watts of emergency lighting.

The choice of Exide-Manchex Batteries for emergency power is a logical one, for in Exide-Manchex you get . . .

POSITIVE OPERATION: Dependable performance at ample voltage with no switching failures.

INSTANTANEOUS POWER: High rates for switchgear operation with adequate reserve power for dependable performance of all other control circuits and also emergency lighting.

LOW OPERATING COST: Extremely low internal resistance.

LOW MAINTENANCE COSTS: Water required about twice a year. No change of chemical solution needed during life of battery.

LOW DEPRECIATION: Sturdy, long-life construction.

GREATER CAPACITY in a given amount of space avoids overcrowding of equipment.

These features all contribute to the dependable performance of Exide-Manchex Batteries—help make Exide-Manchex *your best battery buy* for all control and substation services.

• • •

YOU GET ALL THESE FEATURES IN THE EXIDE-MANCHEX

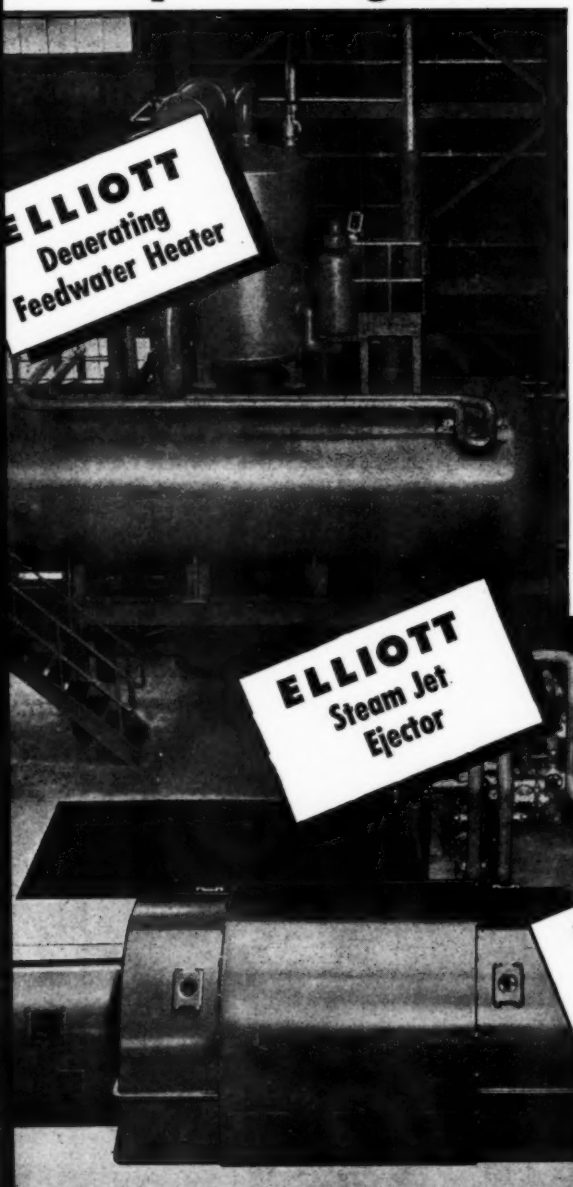
- **The *exclusive*, long-life manchester positive plate.**
- **Slotted plastic separators, impervious to chemical and electrical reaction.**
- **Plastic spacers for plate alignment.**
- **Latest development in molded glass jars.**
- **Heavy terminal posts with copper inserts for extra conductivity.**

THE ELECTRIC STORAGE BATTERY CO.
Philadelphia 2
Exide Batteries of Canada, Limited, Toronto
"Exide" and "Manchex" Reg. Trade-marks U.S. Pat. Off.

1888 . . . DEPENDABLE BATTERIES FOR 64 YEARS . . . 1952

ELLIOTT

. . . pacemaker
power generating equipme



This photo shows Elliott teamw
at its best — three units vital to
nomical power generation, groupe
a single utility plant. In the same p
although not shown in the photo,
also an Elliott surface condenser
an Elliott evaporator pre-heater.

Wherever quality performance
valued you are likely to find the Ell
nameplate on a wide variety of ma
power plant equipment.

ELLIOTT COMPA

Deaerator and Heater Dept.

JEANNETTE, PA.

Plants at: JEANNETTE, PA. • RIDGWAY,
AMPERE, N. J. • SPRINGFIELD,
NEWARK, N. J.

DISTRICT OFFICES IN PRINCIPAL CIT

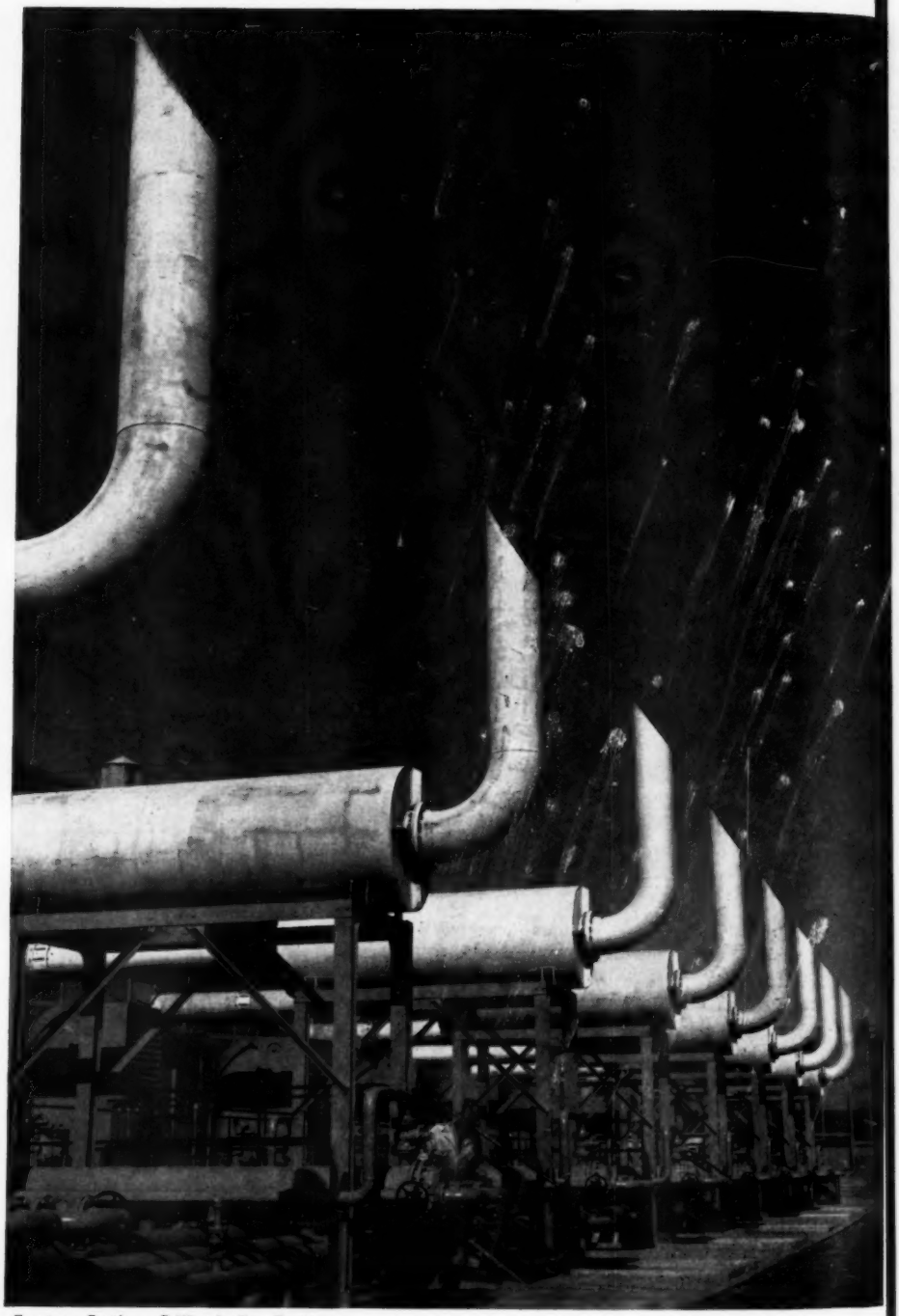
Utilities Almanack

January

31	T^h	¶ *Edison Electric Institute-American Gas Association, Accounting Committees, begin meeting, Columbus, Ohio, 1952.*

February

1	F	¶ *Pennsylvania Electric Association, Systems Operation Committee, will hold meeting, Philadelphia, Pa., Feb. 14, 15, 1952.*
2	S^a	¶ *Public Information Program will hold East-North-Central region meeting, Columbus, Ohio, Feb. 19, 1952.*
3	S	¶ *Louisiana Telephone Association will hold annual convention, Monroe, La., Feb. 22, 23, 1952.*
4	M	¶ *National Association of Purchasing Agents begins public utility buyers' conference, Cleveland, Ohio, 1952.*
5	T^u	¶ *Minnesota Telephone Association begins annual convention, St. Paul, Minn., 1952.*
6	W	¶ *Public Information Program, Steering Committee, begins one-day meeting, New York, N. Y., 1952.*
7	T^h	¶ *Instrument Society of America, New York Section, begins regional power plant instrumentation conference, New York, N. Y., 1952.*
8	F	¶ *Missouri Valley Electric Association ends industrial-commercial sales conference, Kansas City, Mo., 1952.*
9	S^a	¶ *Pennsylvania Electric Association, Prime Movers-Electrical Equipment Committees, will hold meeting, Philadelphia, Pa., Feb. 28, 29, 1952.*
10	S	¶ *American Society for Testing Materials will hold spring meeting and committee week, Cleveland, Ohio, Mar. 3–7, 1952.*
11	M	¶ *Edison Electric Institute, Electrical Equipment Committee, begins meeting, Cincinnati, Ohio, 1952.*
12	T^u	¶ *National Association of Corrosion Engineers will hold annual conference, Galveston, Tex., Mar. 10–14, 1952.*
13	W	¶ *American Water Works Association, New Jersey Section, begins one-day winter meeting, Newark, N. J., 1952.*



Courtesy, Southern California Gas Company

A Peaceful Artillery

Row of natural gas pipeline compressor mufflers at Blythe, California.

Public Utilities
FORTNIGHTLY

VOL. XLIX, No. 3 JANUARY 31, 1952

Salary Stabilization for Utility Professionals

What is the difference between salary stabilization and wage stabilization under the emergency control setup? How does salary stabilization affect staff engineers, "house" lawyers, accountants, physicians, and other professionals regularly employed by utility organizations, state public service commissions, or other regulatory agencies?

BY JOSEPH D. COOPER*

PUBLIC utilities are probably the most regulated of all businesses. They are subject to Federal, state, municipal, and, in a few cases, even county regulations.

No regulations are pleasant, least of all those which concern income. Utilities for years have had their income regulated through rate-making bodies.

Whatever one may think of rate regulation, legislators have deemed it necessary. In a like manner, whatever salaried personnel in the public utility field may think of salary stabilization, the Congress has deemed it necessary. So the problem is not whether we like to be regulated, but, rather how to make the best out of an emergency situation.

The salary stabilization program is part of the total stabilization plan under the Economic Stabilization Agency which includes price, wage, and salary controls under the authority of the Defense Production Act of 1950, as amended.

*For personal note, see "Pages with the Editors."

In September, 1950, the President created the Wage Stabilization Board, under the Economic Stabilization Agency, to control both wages and salaries. Both were frozen temporarily on January 25, 1951.

It soon became apparent that the difficulties of administering wages and salaries together were too great to overcome. Wages are usually arrived at by collective bargaining involving hundreds and even thousands of employees. Salaries are usually arrived at by individual bargaining. Moreover, the salaries of executive, administrative, professional, and outside salesmen personnel are established under conditions varying with those applicable to people paid primarily on an hourly rate basis.

Therefore, on May 10, 1951, Economic Stabilizer Eric Johnston set up a Salary Stabilization Board to stabilize these salaries.

There were some jurisdictional refinements to be made. Generally speaking, an executive earning $55 or more a week comes under the SSB. He must also, however, be performing a managerial function and directing the work of at least two persons. On the other hand, if he is represented by a union in his dealings with management, the Wage Stabilization Board would handle his case.

THE Wage Stabilization Board has jurisdiction over hourly workers and workers represented by a labor union. Recently the Salary board transferred driver-salesmen to the Wage board. There are other factors which may affect the appropriate jurisdiction of a case. But those cited give an idea of the major distinctions.

Although the Salary Stabilization Board was legally created in May, 1951, it was not sworn in until July 10th. Its first chairman was Dr. Raymond B. Allen, president of the University of Washington. The present chairman is Judge Justin Miller, chairman of the board and general counsel of the National Association of Radio and Television Broadcasters.

The Salary Stabilization Board is a policy-making body. A separate Office of Salary Stabilization administers the board's policies.

Outstanding features of the board's policies are:

1. To enable business to operate as flexibly as possible, in accordance with past practice, with a minimum need for submission of petitions for rulings on the cases of individual employees.

2. To preserve the incentive system, the root of American free enterprise, within the needs of stabilization.

The policies of the Salary Stabilization Board parallel the policies of the Wage Stabilization Board in so far as practical. The only justification for deviation is where conditions or procedures of compensation affecting employees under the Salary Stabilization Board are different from those of employees under the Wage Stabilization Board.

ALTHOUGH the various regulations which have been issued thus far by the Salary Stabilization Board have maintained consistency with the economic intent and effect of general wage regulations, in specific provisions are different in many respects simply because the conditions of employment and compensation relating to people within our jurisdiction are different

from those under the Wage Stabilization Board. Let me review, briefly, the principal avenues of adjustment in salaries and other compensation which are available under the regulations issued thus far.

The so-called 10 per cent catch-up formula permits employers to raise salaries up to 10 per cent above the levels prevailing for the first payroll period ending on or after January 1, 1950. This means that if an employer did not give any increases during 1950 he could give increases for a group of employees not exceeding 10 per cent of the salaries for that group. If, however, the employer did actually give any increases in 1950 he would have available for subsequent increases only that part of the 10 per cent which remains, if any. Subsequent regulations of the Salary Stabilization Board have authorized the use of the 10 per cent catch-up formula to augment existing bonus funds or to establish new bonus plans, but we will cover this a bit later in this article.

EMPLOYERS may make their usual merit and length-of-service increases provided that they do not exceed 6 per cent of the annual payroll. This figure applies whether merit and length-of-service increases are made under a recognized salary plan or under a so-called random or personal method of payment outside of a salary plan. The employer has some flexibility in apportioning the increases. For example, under the random method, while he is limited to 6 per cent in the aggregate, he can pay individual employees as much as 10 per cent in any one year. This means that some others must receive less than 6 per cent. Under a salary plan he can follow the terms of the plan and pay whatever the plan may yield to individual employees but there, too, he cannot exceed 6 per cent in the aggregate.

The third of the percentage formulas under which salary adjustments can be made is that permitted under the regulations for the maintenance of compensation relationships. In brief, employers are authorized to make the same percentage increases for employees under the jurisdiction of the Salary Stabilization Board as they have made for employees under the Wage Stabilization Board. This authority is limited to such increases as result from cost-of-living increases, general wage adjustments approved by the Wage Stabilization Board, and any other basic increases approved by that board. It does not cover promotions, reclassifications, correction of individual inequities, etc.

THE employer computes the percentage of increases in base com-

¶ "PUBLIC *utilities are probably the most regulated of all businesses. They are subject to Federal, state, municipal, and, in a few cases, even county regulations. . . . Whatever one may think of rate regulation, legislators have deemed it necessary. In a like manner, whatever salaried personnel in the public utility field may think of salary stabilization, the Congress has deemed it necessary.*"

pensation of the types just described which have been granted to employees under the jurisdiction of the Wage Stabilization Board since January 25, 1951, and makes similar computations for employees under the jurisdiction of the Salary Stabilization Board. If he finds that the increases for the people under the Wage Stabilization Board exceed those for the people under the Salary Stabilization Board he then has available the difference in percentages as a basis for correcting inequities between the two groups. Once he makes these computations he may thereafter keep on a current basis if he wishes. For example, if a cost-of-living increase of 2 per cent is granted to the first group he may simultaneously do the same for the people in the second group provided he has kept his computations current so that he can ascertain immediately that the 2 per cent is also available for them. The regulations (see General Salary Order No. 6) provide that the employer must first correct inequities in the compensation of foremen and other supervisors and then in the compensation of any other employees before he can distribute the available increases to other employees out of the fund available.

THUS far we have talked about formula adjustments in regular salary. Employers can create new positions without prior approval, provided that they pay salaries commensurate with the duties and responsibilities of those positions in the same company, in the same community, or in any other similar companies. They may make promotions, which means the transfer of employees from lesser duties and responsibilities to higher duties and responsibilities, and they may pay the employees the higher compensation of such higher positions provided they certify on their records that the promotions are bona fide. Mere changes in title do not, of course, constitute promotions. There must be actual increases in the difficulty of the responsibilities. Increases in volume of work performed or hours worked or number of employees supervised do not in themselves constitute increases in the difficulty of work.

BONUSES constitute the most favorable form of compensation in addition to salaries. The present regulations permit employers to pay bonuses where they have done so in the past. The basic policy of the board was to limit bonuses to 1950 experience. In order to afford some flexibility in those cases in which companies had an unusually poor experience in 1950 as compared to other years, the board authorized employers to select any three out of the five years 1946 through 1950 and compute an average for those three years. Thus the employer could either select 1950 as the base year or he could establish a base bonus fund from the 3-out-of-5-year average. Employers are then given maximum discretion as to the distribution of the bonuses among their employees, but in order to limit to some degree this distribution, the board required that no bonus paid to any employee may exceed the highest bonus actually paid during the base period.

The board made a further relaxation applicable to those few cases where there have actually been bonuses

Proper Enforcement of Salary Regulation

"In order to have self-administering regulations it is necessary to couple this with a strong enforcement policy so that employers who conform with the regulations will not be under penalty because of others who gain an unfair competitive position in the employment market as a result of more liberal salary due to noncompliance. Accordingly it is the intention of the [Salary Stabilization] board that there be the strongest possible enforcement program in the interests of the many."

of a contractual nature in which employees were given what amounts to vested rights in a fixed percentage yield of profits. Accordingly, the board authorized the continuance of such bonus arrangements provided there was absolutely no discretion on the part of management as to the payment of these bonuses or as to the manner of distribution.

Many requests have been received from employers to authorize them to establish bonuses where they have not had them in the past. There are many difficulties in the way of the creation of policy which would permit this. The board has, however, authorized the creation of new bonus funds out of funds which may be accumulated through the application of existing regulations.

The employer may take what is available to him under the 10 per cent catch-up formula and annualize (computed on an annual basis) it for the payment of bonuses. He may do the same under the formula which permits the maintenance of compensation relationships, as described above. In this case he may also annualize the bonus payment. By annualizing is meant to have available for payment in succeeding years, the amount initially available from these funds and actually paid out in new bonuses. Of course, employers can also augment their existing bonus funds in the same way.

Stock option and stock purchase plans are covered by General Salary Stabilization Regulation 4.

This regulation provides that stock option plans, under which the employee may acquire stock upon payment of less than 95 per cent of its value, require approval of the Office of Salary Stabilization before they can be put into effect. In such cases the difference

between 95 per cent of the value of the stock and the option price actually paid, shall be considered an increase in compensation under Salary Stabilization Board regulations.

A STOCK option, within the scope of the regulation, may be granted to an employee and may be received and exercised without prior approval if the following conditions are met:

1. The stock option is a "restricted stock option" within the meaning of § 130-A of the Internal Revenue Code and the corporation granting the option is furnished with a written opinion of counsel to that effect.

2. The option by its terms is exercised by the employee only while he is an employee of the corporation granting the option or of a parent or subsidiary corporation of such corporation, or within three months after the date he ceases to be an employee of any such corporation.

3. At the time the option is granted the option price is at least 95 per cent of the fair market value at such time of the stock subject to the option.

4. The option is granted as an incentive and to encourage stock ownership by the employee in the manner contemplated by § 130-A of the Internal Revenue Code, and not provide an increase in compensation not otherwise permitted by salary stabilization regulations, as evidenced by a resolution to that effect of the board of directors of the corporation which granted the option.

5. The corporation which granted the option will not claim as a cost or expense under any law or regulation any amount in respect of the transfer of the stock pursuant to exercise of the option, and the company files a warranty to that effect.

AT the same time the option is granted to the employee, the fund available for such an increase in salaries or other compensation is to be charged with an amount equal to the difference between 95 per cent of the fair market value at such time of the stock subject to the option and the option price of such stock, in the same manner and subject to the same provisions and limitations as if the employee had received a salary increase in such amount.

A stock option may be authorized only for use as incentives to employees in the manner contemplated by the Revenue Act of 1950. The option is not to be used to provide increases in compensation not otherwise authorized by other salary stabilization regulations and, if so used, would constitute a violation of the Defense Production Act and salary stabilization regulations, subject to the penalties provided by law. If the stock subject to the option is held at least two years from the date the option was granted, and for at least six months after the option was exercised, it will be conclusively presumed that the stock option was granted properly under the regulation.

Corporations which have granted or may grant a stock option subsequent to January 25, 1951, are required to file a copy of the plan, pursuant to which the stock option was granted, with the Office of Salary Stabilization. Conditions under which stock purchase plans may be put into effect follow, in a general way, the conditions on stock options.

SALARY STABILIZATION FOR UTILITY PROFESSIONALS

Engineers

THE policies of the Salary Stabilization Board on engineers and accountants are of especial interest to the public utilities since these groups are vital to their administration and operation.

Appeals have been made to the board to have engineers and accountants exempt from the SSB. These appeals have been denied, since it was felt that the granting of exemption to all these groups would furnish a precedent for the application of still other groups. Salaried accountants and salaried engineers, like others under jurisdiction of the Salary Stabilization Board, may be given increases of 10 per cent, under the so-called catch-up formula, merit and length-of-service increases, and bonuses within certain limits.

Therefore, it is possible for engineers and accountants, along with others, to get salary raises on the same basis as others. Employers may also petition to have interplant inequities in salary levels approved. The board realizes that special attention must be given to the problem of engineers, who are in short supply. As an initial measure, it adopted General Salary Order No. 8, which contains the following statement, § 2:

Extended workweek. (a) An employer who on or prior to January 25, 1951, had a plan or practice of paying professional engineers additional compensation for hours worked in excess of a normal workweek may continue to pay additional compensation to such employees in accordance with such plan or practice.

(b) An employer who did not have such a plan or practice may pay a professional engineer employed in a professional capacity, as distinguished from an executive, administrative, or outside salesman capacity, additional compensation during a regularly extended workweek for hours worked in excess of the normal workweek, but the additional compensation shall not, without approval of the Office of Salary Stabilization, exceed his straight-time rate.

Further special regulations dealing with the problems of engineers are under study.

Lawyers and Physicians

STAFF lawyers and physicians regularly employed to do their professional work as part of utility operations, at salaried compensation, are exempt under the law as explained in Interpretation 1 (issued September 28, 1951). To qualify for this exemption, however, they must be engaged in a professional capacity and admitted to regular practice.

¶ *"THE policies of the Salary Stabilization Board on engineers and accountants are of especial interest to the public utilities since these groups are vital to their administration and operation. Appeals have been made to the board to have engineers and accountants exempt from the SSB. These appeals have been denied, since it was felt that the granting of exemption to all these groups would furnish a precedent for the application of still other groups."*

In the matter of part-time lawyers, who double in the rôle of company official, manager, etc., Interpretation 1 states (§2(a)):

> (a) *Attorneys.* Attorneys are sometimes employed by law firms as office managers, investigators, or secretaries. Their functions in such capacities are clerical or administrative, and professional work as an attorney at law is not their primary duty. To the extent that nonprofessional activities predominate, such attorneys are not exempt from the jurisdiction of the Salary Stabilization Board.
>
> Attorneys may be employed in a dual capacity, such as being associated with a firm of attorneys and acting as officer of a business corporation at the same time. In such instances, the salary received for services as such corporate employee remains subject to salary stabilization. To be exempt, an attorney must be employed and paid by an attorney or firm of attorneys engaged in the practice of his or their profession; attorneys in the employ of any other employer are not exempted by the statute.

The board has also issued regulations relating to the compensation of outside salesmen. These are not of special applicability to public utilities so they will not be covered here.

In developing its regulations the board aimed to make them self-administering to the fullest extent practicable.

It desired to give the employer broad rules under which he could use his own judgment as to what he could or could not do. Many of the questions which we receive through the mail can be answered by the employers themselves if they would study the regulations before they write to the Office of Salary Stabilization. If the employer wishes assistance in understanding them he should go to the nearest Wage and Hour field office where he will be given such assistance.

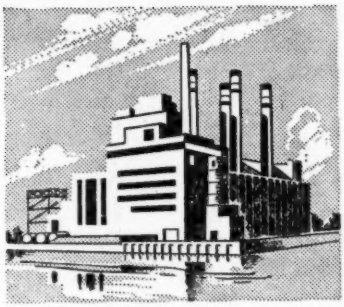
IN order to have self-administering regulations it is necessary to couple this with a strong enforcement policy so that employers who conform with the regulations will not be under penalty because of others who gain an unfair competitive position in the employment market as a result of more liberal salary due to noncompliance. Accordingly, it is the intention of the board that there be the strongest possible enforcement program in the interests of the many.

THE *Office of Salary Stabilization is expanding its information services to give nation-wide assistance to industry.*

The 80 field offices of the Wage-Hour division, Department of Labor, are distributing copies of regulations and other pertinent material.

Then, too, the Office of Salary Stabilization is opening 14 field offices which will be functioning in a few weeks. These offices will be in New York, Boston, Philadelphia, Richmond, Atlanta, Cleveland, Detroit, Chicago, Minneapolis, Kansas City, Dallas, Denver, San Francisco, and Seattle.

These OSS field offices and the Wage and Hour units will be in a position to give public utilities suggestions on how they can give salary increases under the regulations, and receive petitions.



Electric Power and the American Way of Life

It would be impossible to maintain the high living standards of the American public without an abundant supply of electricity. But electrification was a process that did not come by itself, following the launching of the industry in the days of Edison. It took research, planning, testing, and promotion, which are going on all the time to find new and better uses for electric power in industry and in the home.

By TITUS G. LeCLAIR*

PHENOMENAL progress has been made in living comforts and in the national strength of the United States during the seventy years since the advent of central station electric power.

A century ago in this country, men worked long hours and their tasks required great physical exertion, which at best could produce only a meager subsistence compared to the present-day standards of living. Much of the progress which has reduced the effort in human labor and has produced the modern conveniences has come about through the application of electric power to perform the arduous tasks previously performed by man.

Many factors have contributed to our progress and it would not be reasonable to assume that electric power is the sole factor. Nevertheless, it is so cheap and so adaptable that it has been a lever to lift our economy.

Not much progress was made by mankind in the production of goods and services in the thousands of years up to the time of the industrial revolution. On the other hand, very rapid progress has been made toward better living during the lifetime of many of us, and this progress during the electric age has been much greater than in all of man's previous history. Man's

*For personal note, see "Pages with the Editors."

early tools, such as the wheel and screw and lever, were helpful, but with power for these implements furnished by the physical exertion of men and animals, production per man-hour was necessarily limited. With the advent and the rapid growth in the use of electric power, which is convenient, highly adaptable, and economical, the production per man-hour has been increased tremendously; furthermore, the developments of many new machines, materials, and services have been stimulated or made possible.

EVEN when man made use of animals or a water wheel, steam or combustion engines to increase his productivity, still the power source and the use of the power were bound together at one location. The source of power might be much too small or much too large for the task at hand. Also, the power production was often inefficient and costly. In any event, the source required much space in relation to the production facilities, and usually lacked flexibility.

On the other hand, electric power is unique in both production and use. With electric power available, it has become feasible to select locations best suited from the standpoint of over-all efficiency to convert the primary power into electricity on a bulk-power basis. Electric power can be transmitted and distributed to the users and their equipment exactly at the location where needed, in the form suitable for the particular utilization purposes, and in amounts only as required at any moment. Then we have the final conversion, that is, electricity into power to drive a machine—large or small, or into light, or into sound in the radio or telephone system, or into heat, and so forth.

The relation of electric power to the economic progress of the United States is shown by the fact that although it has only 7 per cent of the world's population, it produces nearly half of the world's electricity. During 1950, production was about 388 billion kilowatt hours, while the next greatest production, in Russia, which has a larger population, was less than one-fourth as much. With about 5 per cent of the world's area and 7 per cent of the world's people, the United States produces over 80 per cent of those things that make for good living as against mere existence.

THE commercial use of electricity had been in effect for almost twenty years at the turn of the century, but during the past fifty years the total annual production of electricity in the United States has increased about a hundredfold.

Figure 1 shows the over-all increase in the use of electric energy in the United States on a *per capita* basis from 1920 to date. These data are based on the sum of the production by utilities contributing to the public supply and by those industrial establishments which operate generators, with 85 per cent coming from the former in 1950. In 1920, when some of us were finishing our formal educations, the annual production of electricity was about 500 kilowatt hours *per capita*. Now, only thirty years later, the production of electricity has grown to over 2,500 kilowatt hours *per capita*. This spectacular growth in three decades brings to mind a picture of the ever-increasing and ever-widen-

KILOWATT HOURS

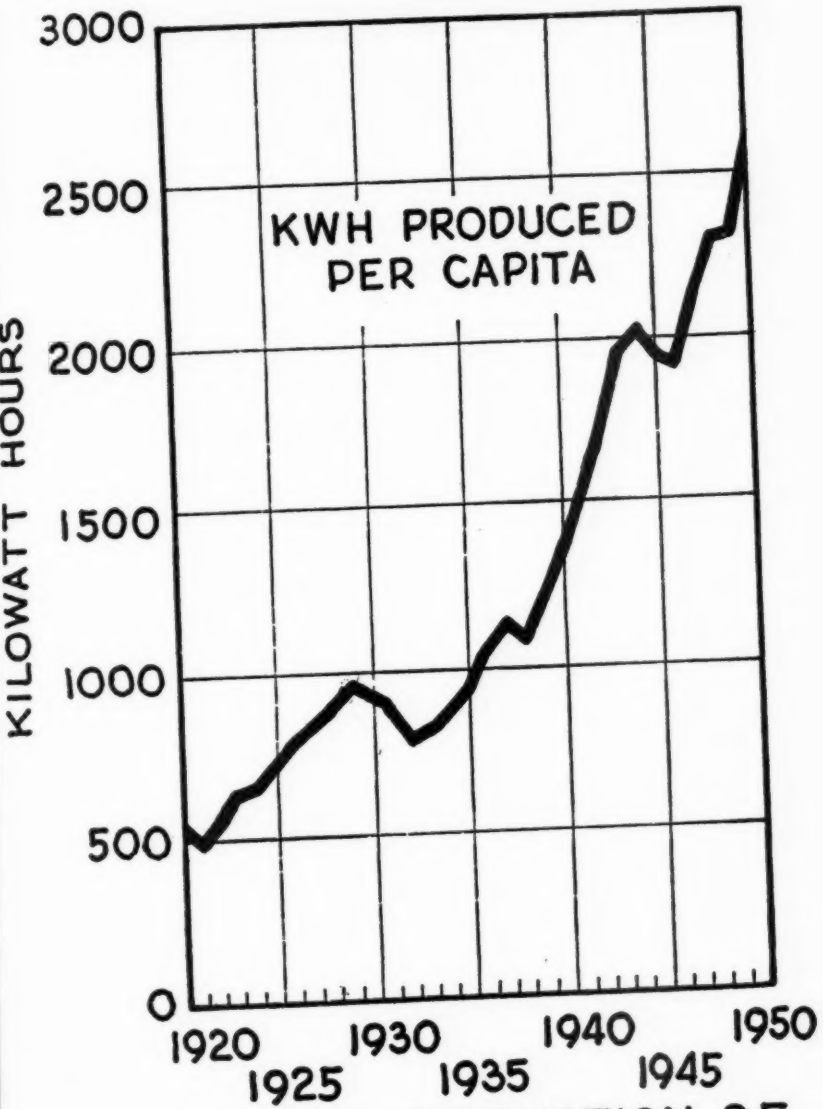


FIGURE 1 – PRODUCTION OF ELECTRICITY IN THE UNITED STATES

ing uses of electric power in the factory, mine, office, public place, farm, and home.

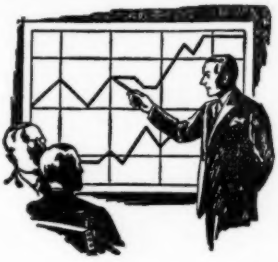
Since 1882, when Edison and his friends started the operation of the first utility to supply electricity to the general public, the power that assists each American factory worker has increased from 1⅓ horsepower to almost eight horsepower. Prior to that period, none of the power was electric; now, almost all of it is electric.

To my mind, a better indicator of the importance of electric power in industry is the actual kilowatt-hour usage per year for each production worker in manufacturing plants. Figure 2 (page 149) shows how this rate has grown in the past thirty years. In that rather short period, the usage per worker has quadrupled. In 1950, the average production worker in manufacturing industries used about 13,000 kilowatt hours of electric energy. This amount of energy is equivalent to the physical efforts of about 100 men working 40-hour weeks for one year. This figure of 100 is, of course, an approximation, as methods of calculation give results varying from 75 to 200 men.

Observations in factories bring out no end of illustrations of the flexibility of electric power in enabling the individual worker to perform tasks in a convenient and efficient manner. In each case there are interesting instances of how electric power, combined with machinery, requires only a fraction of the man power that was previously required. This is seen in machines and associated apparatus used in canning factories, in making lamp bulbs, in steel mills, and so forth. The electric light bulb is made by a large machine which costs many thousands of dollars, but which requires the attention of only a few girls. The result is a bulb that now costs less than a tenth of what it did in the beginning of the century, even though the costs of materials and man power have increased considerably. In this case, as in many others, the product also is improved.

Many tasks performed today by electric power, in addition to being done at less cost, would be practically impossible to do without this convenient form of power. Consider the electric-driven conveyor belts which are vital links in a large rail-to-barge coal transfer plant in Illinois. Twin 60-inch belts carry 2,000 tons of coal each hour up an 11-degree incline, a distance of 360 feet, to a tower from which it is dropped into river barges. Calculations show that a strong man, using a wheelbarrow, could move only two tons of this coal in an hour (and he probably couldn't keep up this rate for long). Therefore, we would need 1,000 men with wheelbarrows to do the work of these two conveyors. As it is, only one man operates this conveyor system and a few others handle the barges and do maintenance work. The cost of the electricity for the motors is only a few dollars per hour.

Besides this great saving in man power to convey the coal to the barges, this plant is an example of how the electric system is used to great advantage in controlling operations. In this case, the electric system energizes a series of devices to control and interlock the car dumper, feeders, conveyors, and other parts of the coal-



American Power and World Supply

"THE relation of electric power to the economic progress of the United States is shown by the fact that although it has only 7 per cent of the world's population, it produces nearly half of the world's electricity. During 1950, production was about 388 billion kilowatt hours, while the next greatest production, in Russia, which has a larger population, was less than one-fourth as much. With about 5 per cent of the world's area and 7 per cent of the world's people, the United States produces over 80 per cent of those things that make for good living as against mere existence."

handling plant. If one part of the system overloads or stops, the feeders stop automatically to prevent the coal being piled up somewhere in the plant.

IN other fields, such as at new power stations having centralized control, the use of electric signals and speech communication has reduced the manpower requirements. Centralized control systems, which utilize electronic as well as 60-cycle circuits, reduce the operating personnel needed in the boiler room, turbine room, operating gallery, and around the electric apparatus. As a result of using such improvements in the new Ridgeland station near Chicago, the total required personnel is equivalent to only one man for approximately 2,000 kilowatts of net capacity.

While the horsepower per factory worker has risen to six times its initial value in the electrical age, the standard workweek has decreased from sixty to forty hours. Furthermore, the physical exertion required in doing factory work has been decreased greatly by the use of power-driven machines. The gain of twenty hours per week available for recreational, cultural, and other pursuits represents more of a gain than may be apparent at first. The better working conditions and less physical exertion resulting from the use of electric light and power leave the worker in much better mental and physical condition to enjoy his increased leisure time.

During the same period—that is, since the beginning of the electrical age—the purchasing power of the fac-

tory worker has practically tripled. This sharp increase is a direct result of many things, including, in particular, the harnessing of electric power to increase the production per man-hour.

ALTHOUGH 75 per cent of the electricity used in factories operates motors, much is used for lighting and, more recently, for such operations as infrared heating, dielectric heating, and electric furnaces. New or improved products or improved operations have resulted frequently. For example, the use of electric furnaces has made possible some new and higher quality steels, from which we have produced gas turbines, jet engines, and other new or more efficient machines.

The increased use of electricity in factories has been accelerated by its relatively minor cost. In the past few years, the cost of electricity used in factories has been, on the average, three-fourths of one per cent of the selling price of the factory products.

Another field in which electric power has contributed greatly to better living has been in our homes. Thirty years ago, electricity was used there mostly for lighting. Now, electric power is used in over two-thirds of our homes for refrigeration, washing, ironing, for clocks and radios, and for the many other electric appliances in common use, such as vacuum cleaners and electric ranges.

MANY who read these lines, particularly those who were reared in rural areas or small communities, remember vividly the kitchen of their childhood days. The standard cook stove was a coal burner, which radiated heat that was welcome in winter, but made the kitchen almost unbearable in warm weather. Frequently, the family washing was done in the kitchen, particularly during cold or inclement weather. The hand-operated washing machine, or even the tub and washboard, may have been better than beating the clothes on a rock, but still washing was time-consuming and inefficient drudgery. And then the ironing, done with heavy irons which had to be heated on that monster—the coal stove.

Who can evaluate the improvement resulting from today's electric stove, washer, dryer, and ironer? Dial switches give automatically regulated heat to each element of the stove, clothes are put into the washer which stops itself when they are washed, a push-button operated dryer gets the clothes dry in a few minutes, and ironing can be done rapidly by an ironer which the housewife operates while seated on a comfortable chair. The net result is that the modern housewife has time and energy for many other interests that her grandmother could not enjoy.

IT is somewhat surprising to see how rapidly the newer electric devices are being adopted for home use; for example, 13,000,000 homes have television sets, 3,500,000 have food freezers, and 4,000,000 beds have electric blankets. Lighting now constitutes only about one-third of the usage of electricity in the home, even though we have been adopting larger and more numerous light sources for useful and decorative lighting. The over-all result has been the phenomenal growth depicted in Figure 3 (page 151).

This again presents data on the unit

basis; that is, in kilowatt-hour consumption per year for each residence using electricity. In 1950, this usage was 1,830 kilowatt hours per residence, or 5½ times the unit usage in 1920. It is interesting to note that even

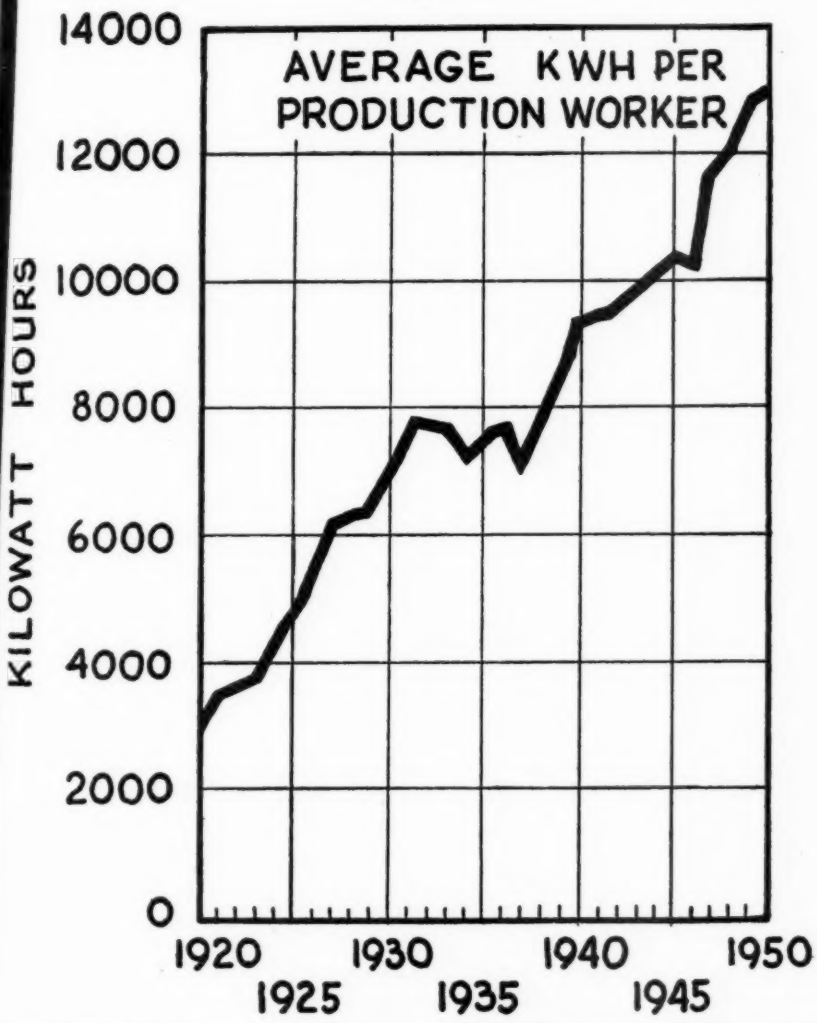


FIGURE 2 - USE OF ELECTRIC POWER IN U.S. MANUFACTURING INDUSTRIES

during years of business recessions and depressions, the average residential consumer always has increased his usage over the previous year.

Here again the increase in the use of electricity for a variety of purposes has received impetus from the relatively low cost of the electricity. The average expenditure for household electricity is only nine-tenths of one per cent of the total personal expenditures. The average family has been spending nearly as much money for movies as for home electricity, and spends 2½ times as much for smoking.

The use of electric power on farms has grown very rapidly in recent years. Whereas in 1925 about 250,000 farms, representing only 4 per cent of the total, had electric service, by 1930 the utilities had increased this ratio to 10 per cent. Now, about 90 per cent are using electric service, and it is available to about 95 per cent of the farms. The average usage on the farm has grown rapidly, as in the home, mainly because the farmer is using electricity for many operations formerly performed by his own physical efforts or with the assistance of animals. In 1950, the total kilowatt hours used on farms was about 5 per cent of the total use in the country, but it was five times greater than the farm use only ten years earlier.

ELECTRIC power on the farms has contributed, along with the use of tractors and other mechanical devices, to increased food production. The farm output in this country was increased 55 per cent from 1930 to 1950, with a decrease during the same period of 7 per cent in the number of farm workers. As an example of how this increased production is obtained, it may be noted that one milking machine and a few other electric labor-saving devices on a moderate-sized dairy farm replaces one man. And the power cost is of the order of only $50 per year.

Of course, this outstanding growth in the use of electric power in the factory, in the home, and on the farm, and the attendant progress, is the combined result of a number of factors and of the contributions of various groups of people. One group, the electrical engineers, have played a leading part in this picture. Not only have they designed and operated larger generators, motors, transformers, cables, and the like, and developed new types of equipment for producing and distributing the greater amounts of energy required, but these things have been made with increased economy of materials and labor. In addition, important improvements in efficiency of operation and in reliability of service have been effected.

ALMOST every new product which is invented and put into production requires some new machine for its production. The list of these new machines is practically endless, and almost every one is powered by electricity, the source of power which can be used the most efficiently and can be applied at any point where it is desired. From ocean ships to hearing aids, and from arc furnaces to television, electric power is the essence of our modern standard of living, and of the economic strength of our country. We depend upon electric power almost as much as on the air that we breathe.

Every one of us has an ambition to

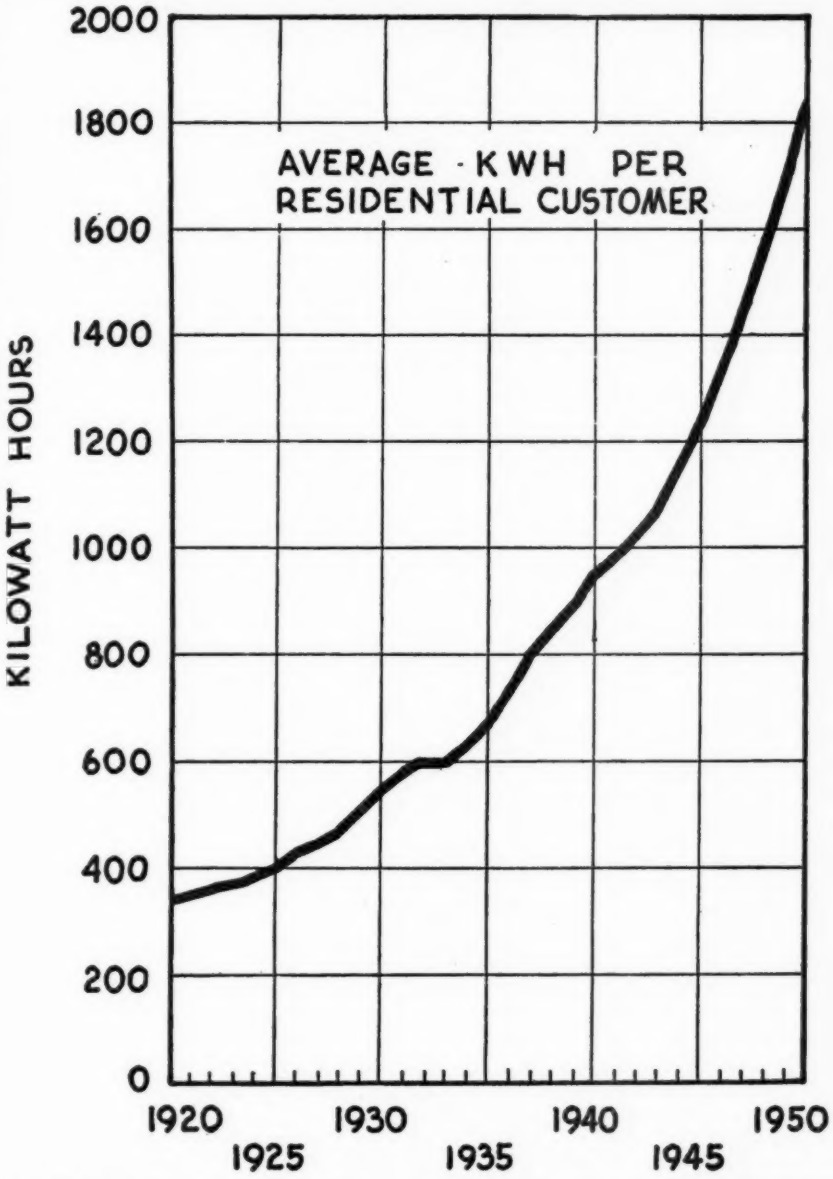


FIGURE 3- USE OF ELECTRICITY IN THE HOME

work shorter hours, to have an easier job, and to have more of the comforts of living—more time for recreation, cultural and civic affairs. This is as it should be. This is the foundation of modern progress. To me this can mean only one thing. If we are to have more production in fewer hours, we must use more electric power and must produce more electric power to do the work of production. In 1950, the production of electricity in the United States was almost 400 billion kilowatt hours, which is a number so large that I, for one, have not the power to visualize it. The peak demand for electric power from the utilities was about 64,000,000 kilowatts in 1950, and the latest forecast is that this demand will increase one-third in about three years.

To industry, electric power is the power to progress; it is the power to obtain more production for a given number of employees. It is the power to produce new and better machines and goods, at far less cost than would be possible without electricity. To the farms, electricity increases the production of food, so essential to the life and well-being of the 150,000,000 men, women, and children in this country. And it was essential in putting the farmer's life and conveniences on a par with those of his city neighbors.

Nowhere is electric power more essential than in our large cities, in which about a third of this country's people live or work. Aside from the use of electricity in the homes, consider the importance of *dependable* electric power for transportation, water pumping and sewage disposal, traffic signals and warning lights, refrigeration for food storage, elevator service to the thousands of tall buildings, fire and police alarm systems, and so forth.

Yes, the availability and use of electric power has been essential to the progress of this and every other country. The record of particularly the last half-century shows clearly that further progress has depended on increased use of power—largely electric power. From the early use of electricity to produce a comparatively feeble yellowish light, its applications have become legion. New uses still come into our lives so frequently that they have become commonplace, and there are no signs of an end to the development. Electric power is truly the key to progress.

"If we are to maintain the march of economic progress we must, individually and as a group, in private business and in politics, display industry, prudence, and self-discipline; recognize that we can't get more out of the economic system than we put in, that collective bargaining in good faith and on solid facts is the road to a workable distribution of total product; and that monetary and fiscal tricks have no power of magic but are a slippery road to misery."

—Editorial Statement,
New York Sun.

Selling the Story of Transit's Need

The transit industry, which must shoulder the responsibility for moving the masses, in physical as well as economic competition with other forms of transport, faces all too many problems. But the first, if not the hardest, is the job of getting its story across so as to awaken general recognition of transit's needs.

By EDWARD DANA*

IN many of the large cities of our land we have what may be termed the "transit dilemma" from which the uninformed public suffers.

Mass transportation was first introduced when horsecars were replaced by electric cars. The advent of rapid transit service contributed substantially to the early growth and development of large metropolitan areas.

Public authorities hampered private managements for years over the issue of fares, neglecting the fact that cost of production controls the price of a commodity. Although endorsing the efforts of labor unions to obtain adequate pay, such authorities hindered the railways by refusing fare increases to meet increased payrolls, which on a mass transportation system account for as much as 70 per cent of its costs.

The result—city after city fell heir to the financing and operation of transit systems. Even then, however, public authorities prevented transit systems from making the contribution to the community of which they were capable. The wholesale introduction of competing jitney lines, of parking meters, off-street parking areas, cage garages, costly street widenings, etc., was encouraged. Generally, there was not and even today is not a recognition by responsible authorities of the fact that a well-developed transit system provides transportation at the lowest cost.

As we read the many comments, articles, warnings, and prognostications about transit, we note over the years many repetitious admonitions falling inevitably into a familiar pattern.

The mass transportation systems that helped to build most of the great cities have become the victims of excessive traffic congestion which, in

*For personal note, see "Pages with the Editors."

turn, has resulted in decentralization. Decentralization itself has caused transit systems to lose riders. The growth in numbers and use of automobiles has further reduced transit volume, especially on Sundays, holidays, and off peaks.

All through the years the public's responsibility (that is, by those who represent it) toward the transit industry has not been nurtured successfully and the industry has had to struggle against imponderables which it could not control.

Of course, transit should appeal to its customers on the basis of comfort, convenience, and a reasonable price for riders. Let us analyze these elements.

COMFORT. The automobile industry, in its effort to produce comfort for buyers of automobiles, has produced new vehicles almost annually with refinements undreamed of in the early period of the industry. A transit company, with 1,000 vehicles having an average service life, let us say, of eighteen years for all of its various types of vehicles, would, under a composite life basis, replace each year only one-eighteenth of these vehicles, or approximately 55. Consequently, at any one time in that period, the percentage of new vehicles that are possible does not approximate the idea many people have as to what comfort in terms of modernity of transit vehicles should be.

Another factor of comfort, whatever the type of vehicle, is the responsibility of management to assure that its vehicles are operated by its personnel in a manner to meet the requirements for comfort. With labor costs and working conditions determined nowadays, for all practical purposes, by outside agencies such as boards or arbitrators, the influence of management, sympathetic to its employees and well-intentioned as it may be, is not the effective influence it once was in persuading its operators that they can contribute to the comfort of the patrons.

CONVENIENCE. This implies in large measure frequency of service and its proximity to the source of riders. The very high cost of construction of car or rapid transit lines fixes their location for many years. But fluctuations in real estate development may impair the convenience of such service as time goes on. Bus lines are more flexible and their routing can be more readily changed. Fundamentally, however, convenience is almost wholly a matter of frequency of service. On this score, a recent experiment in a city of the United States has exploded the theory put forward by politically inclined individuals that more and more service will produce proportionate increases in revenue. The results of experiment were that an increase of 52 per cent in service in off-peak hours brought only a 5 per cent increase in revenue, producing only a small fraction of the revenue needed to cover the additional out-of-pocket expense of providing the extra service. This experiment confirms what most managers knew from their own experience —that increased frequency of service cannot produce revenue beyond the point of the riding potential that actually exists.

A *reasonable fare.* This is somewhat trite, as if one should refer

to a reasonable price for eggs which used to be 33 cents a dozen and today are nearly $1 a dozen.

The fare differs on properties because their requirements differ in regard to readiness to serve, the extent, character, and cost of operations, the amount of investment in the system, and the mileage operated. Here, also, the history of the industry has proved that managements have not had direct control but rather that regulatory bodies, taking long periods to reach decisions, and having difficulty with economic facts, have had the responsibility.

Much stress has also been placed on advertising transit services as a means of increasing riding. If, where the riding potential does not exist, greater convenience (as measured by increased service) cannot produce sufficient revenue to anywhere nearly approximate the added costs, then advertising, which is indirect and not nearly so real as the service expense increases, cannot be considered too effective in meeting the fundamentals of the problem.

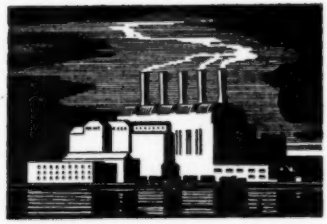
The public (represented by those who manage the cities for the public) has been following a course designed to favor the private transport vehicle, the automobile; a course which has resulted in depleting the income of transit systems. Consider only parking areas, parking meters, traffic regulations, excessive taxicab competition, traffic tangles, to sense the fact that those who should be co-ordinating these factors with transit systems to preserve their usefulness, have directed their thinking and actions in a manner which has been detrimental to the transit industry, which is so essential to municipal existence and to its further sound development.

IN my opinion, many of the writings and rehashing of the known difficulties of the problem may not be so prolific of results as would be a program of effective co-operation among transit companies in presenting to public responsibility (namely, to those who represent the public) the importance of the transit industry and the consideration which should be given to it in the development of plans in the best community interest.

Why not arrange for conferences of our industry in the ATA regional areas at which duly qualified, prepared transit spokesmen can lay before the proper public authorities in these areas, in around-the-table discussions, the A B C of the critical problems of this necessary service industry, and bespeak their constructive, shoulder-to-shoulder assistance to meet the problems head-on and attempt to solve them by co-operative action.

"WE encourage waste and extravagance and corruption in Washington when we ignore official waste and extravagance and corruption in our own local governments. It is gross immorality to cry publicly for rock-bottom economy in Federal government and at the same time lobby quietly for Federal pork barrel local projects."

—WILLIAM H. RUFFIN,
President, National Association of Manufacturers.



Precision Instruments in Utility Operation

In electric utility generating stations across the nation, small instruments are taking over a major share of the operating burden, with resultant benefits to all. Tiny control mechanisms carry grave responsibility for safe and efficient service, doing away with much difficult and arduous labor in utility plant.

By A. BRYAN MARVIN*

MINIATURE axles mounted on bearings cut from precious jewels and springs so small and delicate a fly could use them to build itself a fly-sized innerspring mattress, seem out of place in the giant generating stations of the country where as many as 268,000 electrical horses may be coming to life inside a single generating unit. But the precise instruments made from these tiny parts pull much more than their own weight in the present scheme of things. They make possible today's electric systems. Their continued and expanded use brings into view even larger fields of economy and progress.

To realize the steps that have been taken in the field of instruments and their use to guide central station equipment, it is necessary to return to the days when there were no such controls. Before the first central stations were opened it was rarely necessary for two or more engines to work on the same project. If more than one engine was required to turn a series of machines, the mechanical connection through the drive shaft and the belting was enough to keep the engines in step and prevent one from outdistancing any other.

But the new "fluid," electricity, did not provide a strong enough connection between the prime movers. When two engines were connected to separate generators and these two generators were wired to a common set of electric cables, trouble was the net result. As soon as one engine slowed slightly, the generator to which it was attached began to act like a motor and use electricity to keep up its speed. The increased drain on the supply of electricity available at the moment would cause the other engine to speed and it would tear itself from its bed-

*For personal note, see "Pages with the Editors."

plate just trying to keep the slothful engine located a few feet away turning over at a proper speed.

THOMAS A. EDISON has left an interesting account of one experiment at the Pearl street generating station in New York where an invention designed to correct this difficulty was tried out. Construction of this pioneer central station was well along, generators were in place and cable had been laid along the streets to customers' houses, all on the premise that the system could be made to work. The Wizard of Menlo Park admitted that for once "my heart was in my mouth," as the new contraption was fitted to two of the unruly "Jumbo" units.

"Then we started another engine," Mr. Edison wrote after the fact, "and threw them in parallel. Of all the circuses since Adam was born, we had the worst then. One engine would stop and the other would run up to a thousand revolutions; and then they would seesaw. The trouble was with the governors. When the circus commenced, the gang that was standing around ran out precipitately, and I guess some of them kept running for a block or two. I grabbed the throttle of one engine and E. H. Johnson, who was the only one present to keep his wits, caught hold of the other, and we shut them off."

One of the sprinters, who stopped before he reached the end of the room, adds to the picture in these words: "It was a terrifying experience, as I didn't know what was going to happen. The engines and dynamos made a horrible racket, from loud and deep groans to a hideous shriek, and the place seemed to be filled with sparks and flames of all colors. It was as if the gates of the infernal regions had suddenly been opened."

This could hardly have been called safe and reliable electric service. However, as was the case throughout the development of the new art, a solution to the problem was found—this particular one in a new engine designed and built by Gardiner C. Sims, of Providence. This new engine could be regulated precisely enough to make parallel operation a reality. Steam pressure was built up in the boilers and fed to the engines; the dynamos turned and the new power surged through the interlacing network of cable.

NEITHER voltmeter nor ammeter graced the early central stations. In the Edison plant at Pearl street, voltage was "regulated" by an indicator consisting of an electromagnet connected across the main circuit. The pull of this magnet, which varied with the voltage, was opposed by a heavy spring. The moving part of the indicator carried one-half of a switch which could engage another half as the magnet moved one way or the other. If voltage dropped, the instrument lit a blue signal light. If it rose, a red lamp warned of the condition. An operator stood by to change the voltage of the generator field and set things right. Every few days the electromagnets were carried off to a laboratory to be readjusted.

Engineers who build and design instruments do not have time to argue about whether the chicken preceded the egg. They are too occupied with their own debate about the first instrument engineer: Was he a lazy man looking

for the easy way to do things or was he a Supreme Intelligence?

It was a logical step to move from an indicator to an instrument which would not only show conditions but also make the necessary corrections. This may be done by closing the proper circuits to start up small motors which in turn can adjust valves or move rheostats. Voltage adjustment in central stations today requires an operator's touch only in times of dire distress. And to the customer many miles away, quite oblivious of the central station, this means a steady, constant form of electricity which is reflected from his lights in a clear and steadfast stream.

BOILER operators did not have to be trained from scratch the way electric operators did when the first central stations opened. Boilers were fairly well developed for the sugar industry and mechanical applications by the time electricity required their services. Boiler men knew their business and had many rules of many thumbs to guide them. The draught into the furnace could be judged by holding your hat in front of the firebox door and feeling the pull on it. Water level in the main drum could be told by dashing a dipper of cold water over the head of the drum. The wet part above the water line dried more rapidly than the section of the splash below the line.

As boilers increased in size and complexity these methods became outmoded. The boiler of today is an instrument maker's bread and butter. Temperatures are recorded at many points in the mammoth structures which often are as high as 14-story buildings and capable of turning more than a million pounds of water into high-pressure steam every hour. Not only the temperature of the water and the steam itself, but that of the burning gases inside the furnace is kept under constant surveillance from a central location to which readings are brought by wires.

The level of the water in the boiler's main drum is one of the most critical elements in boiler operation. Too much water floods the unit, too little results in burned-out tubes and even explosions. There was a day when a water tender was stationed beside this important gauge with a regulating valve close at hand. Now the reading of the water level glass is brought down to the boiler control panel and an automatic device keeps the water level within close limits.

This water level is of such importance that some utilities use closed circuit television to bring a picture of the gauge down to the boiler operator on the floor a hundred feet below. This industrial application of the new communication medium works very much like the standard telecasting systems

¶ "USE *of controls and instruments is not confined to the central stations in modern electric systems. Comparable electronic and mechanical marvels control distribution systems. Long-distance transmission lines rely for their safety of operation and efficiency on adequate control.*"

but does not broadcast any signal. The impulses travel from viewing camera to the receiving unit over a specially wired circuit. While the "programs" lack popular appeal and the most interesting scene of the day may well be the sight of a fellow employee with a wiping rag in his hand, the TV set has shown its worth in central stations.

Some plants have found it practical to install closer circuit television to keep an "eye" on their stacks. Since the top of the stack is generally several hundred feet directly above the boiler control room, something like TV was required to bring a picture to the operator. When a boiler develops a spell of internal trouble, one of the first symptoms is often a puff of smoke. With TV installed, this puff is brought to the operator's attention with the speed of light.

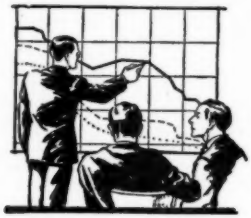
If more than a single boiler discharges into a stack, it is necessary to install equipment in the breeching coming from each boiler so that the operator can tell which unit is in difficulty. These instruments can use the principle of an electric light and a photoelectric cell to record the density of gases emerging through the flue of each boiler.

In starting up a boiler, it is most important that the fuel be ignited by the proper agent. If your auto engine floods, you can wait a few minutes for the carburetor to drain itself clear. If a boiler does the comparable thing, crews will be working for hours to clean up the mess. To make sure that each burner is lit at start-up time, closed circuit television has been used in conjunction with sets of mirrors to bring an over-all picture to the operator's attention. Recently an installation was made where the viewing camera had a field of vision which included the whole floor of the boiler. The camera peers down from the top of the unit and stares directly into the flames as they swirl into life in the giant firebox.

In addition to density and temperature, the exit gases are checked for oxygen content, rate of flow, and other factors which give an indication of what is going on inside the boiler. Engineers today have a very complete and accurate idea of what transpires inside the furnaces of the world, even though no personal visits to the scene have been made successfully since the days of Shadrach, Meshach, and Abednego.

Given a series of observations, it is possible to calculate the efficiency of a boiler, to determine what percentage of the heat content in the fuel is being translated into energy in the steam. One recent device records these elements from instant to instant and supplies the readings to electric kilowatt-hour meters so connected that they give a direct reading in percentage of efficiency. When a boiler operator wants to know whether his unit is up to snuff now he does not have to wait several days for the readings to be taken and for the calculations to be made. If his boiler is equipped with this device, he can simply take a look every now and then.

To further simplify operations in central stations, a device was introduced a few years ago which makes it possible to check bearing temperatures from a distant spot. There are a large number of pumps, fans, motors, and



The Automatic Station of the Future

"INSTRUMENT *engineers do not doubt that the fully automatic station may some day be a reality. In a large city the demand for electricity varies constantly, but the general pattern of the city's requirements from hour to hour may be calculated in advance if the time of sunrise and sunset are known together with the day of the week, a factor which will regulate private lives, business, and commerce.*"

automatic drives in a central station. It has even been said that an electric station is its own best customer, which is not surprising considering the amounts of fuel, water, and air which must be handled in the generating process.

Before this instrument became available, an operator had to walk the floor to observe bearing temperatures. If one began to run hot while he was on the far side of the station and no one else happened to note the trouble, there was delay and a possibility of damaging the unit. The new monitor board allows the operator to take a reading from the control room on any bearing connected to the board. In addition, the device is always on the job. If the temperature of any individual bearing rises above a preset critical level, an alarm is sounded. By making the failure known immediately, the monitor reduces chances of damage and keeps boilers on the job more days per year, lowering costs and further increasing reliability. The man on the street may think a thermocouple is Hollywood press agent slang for a new romantic pair, but the instrument is working for him night and day in power plants across the nation.

USE of controls and instruments is not confined to the central stations in modern electric systems. Comparable electronic and mechanical marvels control distribution systems. Long-distance transmission lines rely for their safety of operation and efficiency on adequate control.

One of the earliest reported instances of remote operation for distribution voltage control concerns a substation operator who had what he considered the perfect plan. Assigned to a substation where he was responsible for keeping the voltage up to par out at the ends of the feeder cables, he found a tavern a few blocks from

the station which happened to be near the end of a favorably curved feeder. Setting his machines, he would adjourn to the tavern, plug his voltmeter into an outlet, and settle down. If the voltmeter showed signs of relaxing, he could return to the station, make the adjustment, and get back to the tavern without missing the gist of his companion's story.

While this early attempt at remote control ended in personal disaster for the ingenious operator, the idea found acceptance and it is now possible to maintain voltage on a feeder automatically so as to produce a desired voltage at a given point along its run.

Similar long-distance controls make possible another modern innovation: the regional power pool. While the phrase "from each according to his ability, to each according to his need" may be questionable politico economic doctrine, the catchy socialist slogan is the basis of operation for a power pool.

Operating disturbances which formerly caused the stoppage of service in smaller systems lose their impact when they are shared by many systems. Even such an event as the shutdown of a generating station causes only an undramatic ripple of which the general public is totally unaware as distant generating units pick up the dropped load.

THE interconnected systems contribute to the temporary deficiency in generation according to preset schedules which take into account the ability of each station and the reserve that is spinning at the time. The same control system keeps the load on the high-tension cables from "swinging" like the early "Jumbo" machines. By reducing the amplitude of the load swings the control makes it possible for engineers to schedule larger power transfers over the same cables.

Instrument engineers are still a little short of their ideal: a generating station which can operate unattended in normal times. They have succeeded in creating a substation where electricity is received at high voltage, reduced to distribution levels, and spread among a number of feeders. This substation regulates its own voltage, performs switching operations as directed from a distant point, and can even police its own yard with electric eyes fixed to sound an alarm whenever any wandering solid interrupts a beam of light.

The operation of boilers has been so co-ordinated that very few manual adjustments need to be made. Incoming fuel is regulated automatically with incoming air and the two are proportioned to achieve the best efficiency. Modern combustion controls result in lower-cost electricity and safer plant operation.

But the loading of generators is still a tough nut. When the public puts out its hand and presses the wall switch it starts a chain. The voltage of the field in the generator must increase to supply the additional kilowatts. To keep the generator turning at its regular speed, the turbines must spin with more power and this means that the boiler must supply more steam. To make the extra steam, the boiler must be supplied with additional fuel and water.

THE rub comes because the voltage of the field cannot be boosted un-

til the extra fuel is converted into extra steam. Since there is no way to store electricity and it must be generated as required, it is necessary for a power plant to keep always a little ahead of the moment's load in order to be able to care for the customer who suddenly decides to vacuum the rug. Instruments now on the drawing boards are designed to help on this problem. By measuring distribution frequency they anticipate new load and start the extra fuel on its way.

With hydroelectric power the problem is a little simpler. The extra "fuel" is secured merely by opening the penstock valves a little wider. But even in this instance there are limitations imposed by the inertia of the water.

One stand-by hydro plant has been converted to unattended service. The controls are set in such a way that the plant operates when demand for electricity reaches a certain level but only if the water level in the reservoir at that time is sufficient. If water level in the reservoir is so high that water is running over, the plant uses this falling water to generate electricity. By using the equipment in this manner to reduce the peak demand figure and to turn excess water into kilowatt hours, the customers come out ahead of the game. Fully automatic control, possible in this case, increased that station's efficiency and reduced operating costs 75 per cent.

INSTRUMENT engineers do not doubt that the fully automatic station may some day be a reality. In a large city the demand for electricity varies constantly, but the general pattern of the city's requirements from hour to hour may be calculated in advance if the time of sunrise and sunset are known together with the day of the week, a factor which will regulate private lives, business, and commerce. Religious holidays and public pageants such as civic welcomes to conquering heroes have a predictable effect on the general shape of the hourly load curve.

THE variations which cannot be calculated in advance are tricks of nature. Temperature, wind direction and velocity, and the percentage of sunlight that gets through to school room, office, and home window are the major variables. It is not dipping too far into a never-never world of science fiction to think of a calculating machine which could take readings from light meters in various parts of the city, notes on temperature changes from weather stations, and combine these with the predicted chart for the day's load to come within 2 or 3 per cent of the actual figure. Such an instrument could recompute its figures several times a minute and serve as a super system operator.

Even though such a scheme may be practical, it is too expensive to be economic at the present state of the industry's development. While instruments and controls can do away with large amounts of tedious, difficult manual labor, they also require a large amount of highly skilled, careful attention. The coal passer's shovel is no longer the symbol of a steam-electric station, but it will be some time before the present tools of the trade are entirely replaced by jeweler's miniature screw drivers.

Washington and the Utilities

The Latest Missouri Waltz

REACTIONS were a dime a dozen, figuratively speaking, to President Truman's recent action in creating by executive order a new agency to study that much studied watershed, the Missouri river basin. Much like a mirror, the President's latest creation seems to reflect the individual views of the particular commentator.

Thus, the *St. Louis Post-Dispatch*, probably the nation's most articulate and persistent protagonist of a Missouri Valley Authority, saw in it a hope that "the commission will be able to evolve a unified method of planning, construction, and operation that will find acceptance in Congress, among the state governments, and with the people." It concluded that the President's independent commission "is exactly what is needed."

Governor Peterson of Nebraska, on the other hand, an opponent of the Missouri Valley Authority proposition, saw in it an effort by the President to revive his perennial proposal, despite the unwillingness of Congress to approve it. He said that the President, "unable to get an MVA through the front door . . . is now trying it by the rear entrance." Likewise, Representative George (Republican, Kansas) said it was "another pitch for support for the MVA idea," and that he thought it would only delay much-needed flood-control projects in the area. Senator Hennings (Democrat, Missouri), who is regarded as likely to be one of the congressional members of the board, as well as Senators Langer (Republican, North Dakota) and Murray (Democrat, Montana), were reported "delighted" at President Truman's action.

SOMEWHERE between these partisan points of view is a more cynical appraisal—that the President was mainly trying to put the MVA into deep freeze during the coming campaign. It was noted that he skated over the subject of natural resources very gingerly in his State of the Union address, whereas on previous occasions he has particularized.

Following out this skeptical reaction to the new Missouri Basin Survey Commission it is expected to serve several convenient political purposes: (1) It will provide a friendly haven for the administration's own MVA proposal. (2) It will provide a lightning rod to attract and deflect criticism from all kinds of local critics of flood-control plans in the Missouri basin—sending their complaints to the study commission instead of making campaign ammunition. (3) It will provide jobs for several MVA conservationists who are now off the regular Federal payroll.

"A thorough reconsideration of the plans for flood control, irrigation, navigation, and hydroelectric power development" is the announced job the commission is to undertake. It will be instructed to (1) review existing and proposed plans; (2) conduct surveys and public hearings; (3) consider cost-benefit ratios of the proposed projects; (4) consult with state and local groups; (5) consider proper Federal-state participation in financing basin projects; and (6) report back its recommendations within one year to the President. In other words, the new MSBC will be expected to go over just about the same well-harrowed ground as the President's Water Resources Policy Commission did a year ago, but on a regional basis.

Both the *St. Louis Post-Dispatch* and

Representative George of Kansas agree on one thing. That is, that the announcement of the eleven appointees will be a pretty good clew as to what the President has in mind for the new commission to accomplish. Half will be Congressmen and half private citizens. But if it is loaded with the same old faces that have dominated the administration power planning in favor of independent authority development, *à la* TVA, for a number of years, it is only reasonable to expect that the authority opponents will cry "window dressing." If the President should name an entirely new cast, with some fresh personalities in the field of natural resource planning, the unexpected might happen.

SEC on the Carpet?

THE day after Congress opened, Representative Heller (Democrat, New York) made some news by calling a meeting of his subcommittee of the House Interstate and Foreign Commerce Committee to look into some old complaints involving the Securities and Exchange Commission. The first witness was retiring Chairman Harry A. McDonald, who had been named the previous day by President Truman to succeed W. Stuart Symington as Reconstruction Finance Corporation administrator. SEC Vice Chairman Donald C. Cook has taken over the duties of acting chairman of the SEC and was regarded as a favorite choice to be named permanent chairman.

But Washington newsmen were anxious to run down the rumors that the House group was going to do another vacuum cleaning job on the SEC and, if any dirt materialized, it might stand in the way of Chairman McDonald's confirmation. As it turned out, it wasn't really that at all. Chairman Heller was simply running down some pretty threadbare complaints reported in the last session by the House Judiciary Subcommittee about the SEC's relationship with regulated holding companies. Since most of the charges dealt with events that happened before any of the present members of the SEC came into the service, it was unlikely that the Heller group could be doing anything more than cleaning up a few scraps of unfinished business left over from the last session.

That, of course, only applies to complaints about SEC regulation under the Holding Company Act. But there were other matters, such as the Kaiser-Frazer and Tucker stock complaint cases which may or may not yield pay dirt. Heller says his inquiry into SEC activities would cover all six statutes administered by the commission.

"WE frankly do not know what the inquiry will develop," he explained. "But there will be no whitewash, if we come across evidence indicating thievery, improper influence, betrayal of public trust, laxity, inefficiency, or any serious departures from the spirit as well as letter of the statutes.

"If we find any instance, past or present, where any one connected with SEC tried to serve two masters or served anything but the public trust, we'll put such a person on the hot seat promptly and loudly. On the other hand, we will not tolerate the type of testimony that can't be backed up and can do unjust damage to reputations. There has been too much of that sort of thing."

Heller disclosed, however, that he was worried when he read in the newspapers that Mr. McDonald soon would leave the SEC for RFC, if confirmed by the Senate. He wanted to make certain, he said, that the subcommittee "didn't lose a star witness" and, therefore, invited Mr. McDonald in for a talk.

Washington Rhubarb

ANOTHER hot potato, which SEC Chairman McDonald probably left without regret when he departed from the SEC regulatory landscape, was the controversial proposed sale of Washington Water Power Company by the American Power & Light Company. This tempestuous situation was moving so rapidly that its finale may be indicated by

the time these lines are in print. But at the moment of writing the winds were blowing gale force.

It will be recalled that on a previous occasion American Power & Light tried to sell the Washington state utility properties, which also extend into Idaho, directly to seven Washington public utility districts. But the state courts blocked that after the SEC, by an evenly divided vote, refused to take jurisdiction over any proposed sale to public agencies such as the Washington PUD's.

THIS time, American Power & Light just got under the year-end deadline fixed by the SEC (January 8th) with another proposition involving a proposed sale to Washington PUD's via an intermediary nonprofit corporation which would take over the outstate part of Washington Water Power which fouled up the earlier sale. A good many people out in that area still think it is wrong, including the governor of Idaho, Spokane city officials, stockholders in American, a number of Pacific Northwest Congressmen, and so forth. Chances were that SEC would again back out of the controversial issue of whether it has jurisdiction over such a sale *per se*. But the possibility of renewed state court litigation was considered excellent, no matter what the SEC decided to do.

One other complication was the attitude of the Western Investment Banking Voluntary Credit Restraint Committee. This committee was formed to carry out the Federal Reserve Board's anti-inflation and Federal credit control policies. It has opposite numbers in other areas of the country. Early in January this committee turned down an application of seven Washington PUD's to issue $115,000,000 in bonds to acquire the Puget Sound Power & Light properties.

Financing of this type, the committee said, would violate the rule urged by the FRB against the unnecessary extension of government credit during the rearmament period for "purchases of privately owned utilities" which would "involve borrowing to replace equity capital." The committee's action created doubt as to whether it would approve American Power & Light's plan to sell Washington Water Power to three PUD's.

St. Lawrence Jitters

WHEN President Truman failed to refer to the St. Lawrence by name in his earlier messages to Congress, seaway proponents decided not to wait. Four Republican Senators, Aiken (Vermont), Ferguson (Michigan), Thye (Minnesota, and Wiley (Wisconsin), pleaded for quick congressional action so as to be sure that the United States participates in the project. The reason for this alarm among the sponsors of Federal legislation to build a seaway is the growing conviction that the Dominion of Canada is not bluffing in its plans to go it alone. The impression prevails on both sides of the international boundary. It is understood in Ottawa, for example, that if by midspring of this year there is no evidence that Congress will carry out President Truman's recommendation for United States participation, the Canadians will delay no further in making the necessary shifts and adjustments to build an all-Canadian seaway. And this is not to say that there is too much optimism in Canada that Congress would be any more disposed to pass the St. Lawrence measure this year than it has in the many years preceding it when the seaway project was before it.

Incidentally, the FPC and New York state seem to have reached a tacit understanding about what may have to be done if the Canadians go through with the seaway in default of United States participation. Both of these parties recently joined in a request to have the court of appeals for the District of Columbia postpone hearings on the controversy over issuing the state a license to develop St. Lawrence power.

In his economic message on January 16th, President Truman did mention the St. Lawrence and other power projects. A special message was due later. It was noted that the budget provided for anticipatory funds.

Exchange Calls And Gossip

REA Telephone Loan Roundup

At the end of the year the Rural Electrification Administration came up with some interesting figures regarding its activities in the field of rural telephone loans. It's the complete picture from A to Z.

In order to observe the figures in the proper focus it is first, perhaps, best to review REA's telephone position appropriationwise from the inception of the program. All in all, REA has received $66,500,000 through fiscal years 1950, 1951, and 1952. In addition for telephone loan allocations, if the need arises, REA may call on the Treasury for an additional $25,000,000 as a result of a budgetary adjustment during the last fiscal year. The funds would be transferred from the electrification program which at the time of the budget cutback had a surplus of funds.

REA's figures on its telephone loan program bring it up to December 21, 1951. Since the inception of the program in October, 1949 (actually the first loan allocation was not made until February, 1950), REA has received 825 loan applications totaling $145,160,336. Of this number it has presently under consideration 232 applications in the amount of $36,156,918. Yet to be acted on are 291 in the sum of $49,616,272. Ineligible or withdrawn applications total 158 in the amount of $20,149,529.

One hundred and forty-four of the total applications received favorable considerations and loan allocations were made in the sum of $39,237,617. Here an important distiction should be made. The $39,000,000 figure represents that part of the total amounts asked for ($145,160,336) that was allocated. Actually, REA has made loan allocations in the amount of $53,813,500.

REA gives this explanation for the use of two different figures. In some cases where loan allocations were made the amount granted was really larger than the amount asked for by the borrower. This usually resulted from engineering studies that were made in the field by REA staff. In some cases it was found that in order to comply with the area coverage requirements of the REA program more expansive activities than originally planned would be taken on by the company. Increased costs of equipment and subsequent loans to the same company also explain the difference between the two allocation figures.

The small telephone companies still dominate the borrower list, although loan allocations to co-operative groups appear to have stepped up within the last year. At present, of the 144 allocations made, 90 have gone to companies and 54 have been received by co-operatives.

The period between June 30, 1950, and June 30, 1951, was the most active in point of loan allocations granted. The first loan allocation was not made until February, 1950, and between then and the end of the fiscal year (June 30, 1950) only 17 allocations were made, or slightly over an average of three per month.

By the end of fiscal 1951, 113 had been made in the whole program with the addition of 96 allocations or an average of eight per month. The average dropped down in the last half of 1951 to slightly over five loan allocations per month with an additional 31 bringing the total to 144.

The REA figures then cover the num-

ber of subscribers affected and the miles of line added. For the loan allocations allowed, 186,868 subscribers will receive either new or improved service. This figure broken down between existing and new subscribers becomes 86,582 and 100,286, respectively. The line mileage involved is 52,382 miles, of which 5,206 will be existing and 47,176 will be new.

The progression of the 144 allocations, moneywise, is listed as follows and totals $53,813,500:

June 30, 1950	$ 3,426,500
June 30, 1951	37,828,500
December 21, 1951	12,558,500

THERE has always been a lag between the time that a loan allocation is made and the loan contract is actually signed by both REA and the borrower. During this time the terms of the actual loan contract are worked out and other financial arrangements are concluded. Of the 144 loan allocations, 96 have been signed and approved by REA totaling $37,961,000, and of this 96, 50 have been finalized by the borrower in the amount of $20,044,000.

Still a further breakdown of this figure shows that of the 50, 40 borrowers have authority to draw money in the amount of $17,045,000. The last and final money figure given is the actual amount of cash that has been disbursed for the entire program—$2,598,702.36. The exceedingly small amount in comparison to the program as a whole is explained by REA officials as being due to various holdbacks in equipment deliveries, and other hindrances which are either directly or indirectly the result of the defense mobilization activity. Furthermore, it is also pointed out that those borrowers who may draw money have no desire to do so until such time as they have payments to make—the reason being that interest on the loan does not begin until the money is disbursed.

In the field of construction progress in the program, REA has announced that 72 engineering contracts have been approved. In addition, plans and specifications for outside plant construction have been approved in the amount of 20 with work actually under way in 7 instances. Plans and specifications have been approved for central office construction for 26 borrowers with 12 of them having work under way.

Aluminum Experiments

TELEPHONE calls may eventually make part of their round trip between telephone users over aluminum wire. This new departure for Bell telephone companies is forecast in an appeal to the National Production Authority for an allotment of aluminum during the first quarter of 1952.

Favorable action on the appeal by NPA will enable Bell system engineers to carry on experiments with aluminum wire to the test installation stage. The telephone companies state they are determined to provide telephone service to just as many people as possible and are intensifying their search for substitutes to offset shortages of raw materials previously used in telephone equipment.

Ability to produce aluminum wire cable in quantities large enough to make a substantial contribution to the demand for telephone service, however, will depend on future availability of increased quantities of aluminum as well as steel, polyethylene, and other materials used in its manufacture.

Use of aluminum wire poses a number of problems in cable design, manufacture, and installation. For example, joining ends of wire together, a relatively simple operation when copper is used, calls for the development of new and more costly splicing techniques. Trial installation of the aluminum wire cable will make it possible to study these problems under conditions of actual use in Bell system companies.

New Almanac

THE Bell system's new coast-to-coast radio voice highway is featured in the thirtieth anniversary issue of the

Telephone Almanac, now being distributed by Bell companies.

Because the new electronic route for telephone calls and television programs follows the trail of the Pony Express, the leading article draws a comparison between that famed equestrian relay and its modern successor. As the *Almanac* points out, radio relay, which carries its messages with the speed of light, edges out the famed horsemen of the gold rush days, who "galloped with urgent dispatches between Missouri and California, sometimes making a one-way trip in nine days."

AT&T Roundup

THE nation's telephone network was strengthened in 1951 to meet growing defense and civilian needs, the American Telephone and Telegraph Company reports in its review of progress during the telephone's seventy-fifth anniversary year.

High lights of the Bell system construction program to expand and improve service included opening of a seventh coast-to-coast voice highway over which telephone calls and television signals are relayed by radio beam, the start on a trial basis in Englewood, New Jersey, of customer dialing of long-distance calls, and the addition of 2,100,000 telephones during the year.

The new cross-country radio relay route was opened for telephone service on August 17th. The first transcontinental television program was carried over the new system on September 4th, when America saw the historic Japanese Peace Treaty Conference.

The Englewood trial makes it possible for 10,000 telephone users in the Jersey suburb to dial 11,000,000 telephones in areas as far away as San Francisco. Direct dialing of toll and long-distance calls by operators also continued to increase, with 38 per cent of all long-haul calls being handled in this manner in 1951.

BELL telephones in use rose to 37,500,000, double the number in service ten years ago. However, demand for telephone service continued to grow and the construction program to be carried out next year will be another big one if materials can be obtained, the company said. The Bell companies have on their books at the end of the year almost 800,000 orders for new service and 1,800,000 orders from party-line customers for service that better meets their specific needs.

Long-distance traffic was greater than in any previous year, averaging over 6,000,000 calls a day, as the upswing in out-of-town calling continued. Several hundred thousand miles of toll circuits were installed in 1951 to help handle these calls.

Cleo F. Craig, president of the AT&T, said that national defense continues to be the first order of business with the Bell system. In addition to meeting the communications demands of the armed forces, the telephone companies pushed their program to assure essential service during emergencies. This program includes arrangements and facilities for shunting telephone traffic around disaster points, provision of stand-by power units at all central offices, utilization of mobile radio and portable telephone units at strategic locations during emergency, and preparation of detailed plans for restoral of essential lines of service.

Financial history was made in May when the number of owners of AT&T stock reached the million mark, first time that any company has achieved such broad ownership.

CRAIG stressed the need for adequate rates and sufficient supply of raw materials in 1952. "To do their big job well, the telephone companies must keep themselves financially strong," he pointed out. "This means that the charges for telephone service must be adequate and whenever they are not sufficient, they need to be made so."

Touching on the materials situation, the AT&T president said that "this essential industry must be able, in the months ahead, to obtain the raw materials it needs."

Financial News and Comment

By OWEN ELY

Gas Industry Continues Its Spectacular Gains

THE gas industry recently reported preliminary figures for 1951, showing a continuation of the accelerated uptrend which occurred in 1950. The number of residential and commercial customers increased about 4 per cent, and industrial 3 per cent. Residential sales (in therms) gained 15 per cent, commercial 9, and industrial 14. Revenue gains approximated 12 per cent for residential, 9 per cent for commercial, and 18 per cent industrial. These figures indicate a continued decline in revenues per therm for residential customers, presumably due to greater use of gas for house heating; the average commercial rate also dropped slightly, but industrial and miscellaneous revenues per therm increased.

Total revenues passed the $2 billion mark for the first time, reaching $2,205,000,000. This figure contrasts with a total of $5,155,000,000 for the privately owned electric utilities (twelve months ended October 31st). In 1951 natural gas continued to "take over" more of the gas industry. (See accompanying table, page 170.) Thus, natural gas contributed 75 per cent of the total industry revenues, compared with 70 per cent in the previous year, and mixed gas 8 per cent *versus* 6 per cent, while manufactured gas retained only 16 per cent compared with 23 per cent in the previous year.

The $1.5 billion gas construction program in 1951 compared with $1 billion in 1950; about two-thirds of the amount was spent for transmission facilities, including expansion of the present pipeline network. The industry raised over $800,000,000 by sale of securities, the balance of $700,000,000 being financed internally or through bank loans. During the next four years the industry expects to average over a billion dollars a year for expansion. Growth will be restricted mainly by shortages of materials, since demand for gas continues well in excess of supply in many areas, and some sections have not yet received it.

THE Federal Power Commission authorized construction of over 12,000 miles of pipeline in 1951, and

DEPARTMENT INDEX

applications for almost that amount were pending before the commission at the year end. Natural gas reached New England and the New York city metropolitan area for the first time, with gas transported 2,000 miles from the wells. Thirty-nine states are now receiving natural gas.

Sales of gas appliances in 1951 were lower than in the previous year, when "scare-buying" occurred: Sales of gas ranges were 2,400,000 *versus* 3,000,000 in 1950, automatic water heaters 2,000,000 *versus* 2,400,000, central heating units 600,000 compared with 1,000,000, etc. However, there was an increased demand for gas incinerators, laundry dryers, air-conditioning units, and industrial equipment.

The industry's efforts to improve the load factor by storing gas underground during the summer showed further progress, with over 350 billion cubic feet stored at the close of the off-peak season. Over $100,000,000 will be spent in the next three years on underground storage facilities, it is estimated.

One of the industry's principal problems at this time is the readjustment of rates to cover heavier taxes, increased construction costs, and higher operating expenses. In the month of October net income for all class A and B natural gas companies was down 21 per cent and in September 19 per cent. Most of the major pipeline systems have applied to the FPC for rate adjustments and cases involving $100,000,000 revenues are now before the commission. Many of these will probably go into effect "under bond" after six months. The distributing companies must seek corresponding relief from the state commissions, so that the burden of higher wholesale rates can be passed on to retail customers, to the extent that this proves necessary to keep earnings in balance.

Analysis of 1951 Utility Financing

THE detailed data on 1950-51 utility financing, as compiled in the bulletin of Ebasco Services, Inc., are now available to its subscribers, and the figures are summarized (in millions of dollars) in the table on page 173. In 1951 the proportions of total financing by the different divisions of the industry were as follows, as contrasted with 1950:

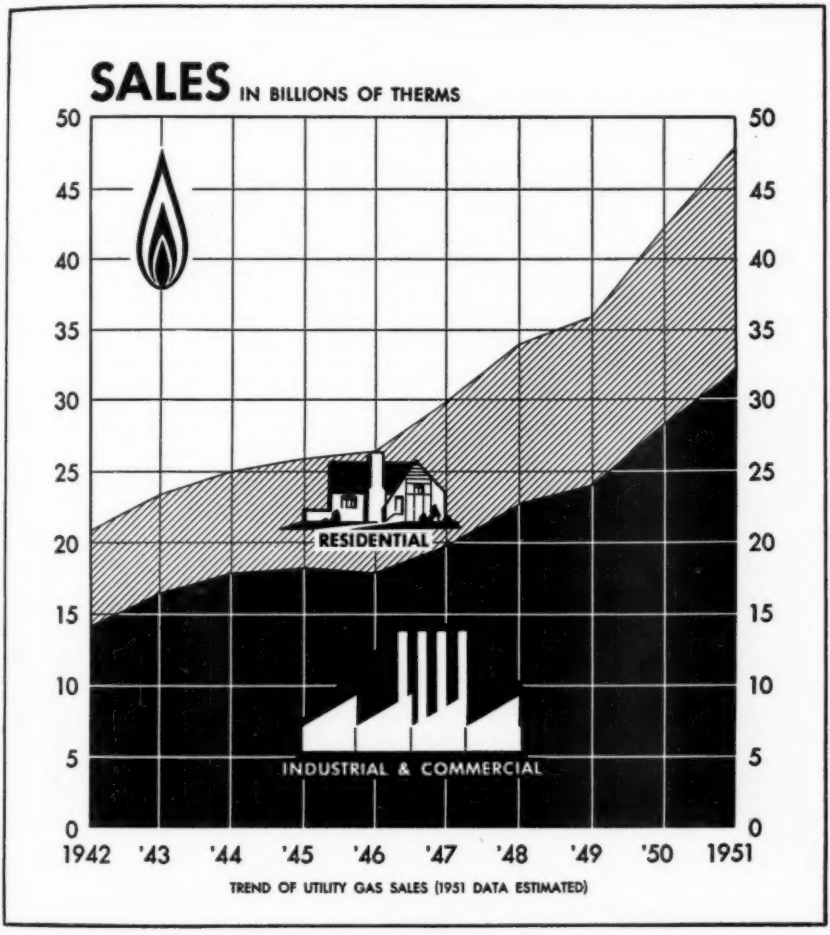
	1951	*1950*
Electric	52%	55%
Gas	27	32
Communications	20	11
Miscellaneous	1	2
Total	100%	100%

The proportion of common stocks offered by subscription in 1952 was 70 per cent of the total, compared with 63 per cent last year. Refunding issues totaled considerably smaller than in 1950 due to the rise in interest rates, and divestments under the Holding Company Act were negligible. Of the "new money" financing, the proportions for electric and gas companies (the communications companies' figures are not representative, as they do not include the substantial increase in American Telephone and Telegraph stock due to conversion of deben-

PERCENTAGE GAINS, 1951 OVER 1950

	Customers (End of Year)	*Sales (Therms)*	*Gross Revenues*
Natural Gas	14%	15%	21%
Mixed Gas	58	27	56
Manufactured Gas	D35	D22	D21
Combined Industry	4%	14%	13%

D—Decrease.



TREND OF UTILITY GAS SALES (1951 DATA ESTIMATED)

tures and sales to employees) were as follows:

	Electric	*Gas*
Long-term Debt	66%	82%
Preferred Stock	11	5
Common Stock	23	13
Total	100%	100%

The low proportion of equity financing for the gas industry seems to reflect the tendency of the new pipeline companies toward thin equity ratios, though the old-line integrated systems such as Columbia Gas System, Consolidated Natural Gas, Northern Natural Gas, etc., have quite substantial ratios.

Competitive bidding lost ground slightly in 1951, constituting only 40 per cent of total financing compared with 51 per cent in 1950. Private sales were also smaller, possibly due to the huge industrial financing being done by the large insurance companies.

The index of new issues recently pub-

lished by Shields & Company shows that at the year end 71 per cent of 34 utility common stock issues were above the original offering price, compared with 43 per cent for the entire list of 150 common stock offerings.

LIST OF NEW YORK BROKERS' UTILITY ANALYSES*

Company Analyses	*Firm*	*Pages*	*Month*
American & Foreign Power	Goodbody & Co.	1	December
American & Foreign Power	Sutro Bros. & Co.	2	November
Brooklyn Union Gas	Kidder, Peabody & Co.	2	November
Central Illinois Light	Francis I. duPont & Co.	1	November
Central Public Util. Deb.	Ernst & Co.	5	December
Cincinnati Gas & Elec.	Paine, Webber, Jackson & Curtis	2	December
Consolidated Edison	Dean Witter & Co.	1	December
Consolidated Edison	Argus Research Corporation	2	January
Con. Gas of Balt.	Argus Research Corporation	4	December
Florida Power Corp.	Goodbody & Co.	1	November
Houston Lighting	Paine, Webber, Jackson & Curtis	2	November
Iowa Public Service	Josephthal & Co.	2	November
Laclede Gas	Paine, Webber, Jackson & Curtis	3	January
Montana Power	Goodbody & Co.	1	January
Montana Power	Blyth & Co., Inc.	23	January
Mountain Fuel Supply	Kerr & Co.	4	December
New York State E. & G.	Argus Research Corporation	6	November
Niagara Mohawk Power	Kidder, Peabody & Co.	20	September
Northern States Power	Smith, Barney & Co.	2	October
Ohio Water Service	Cohu & Co.	4	December
Oklahoma Gas & Elec.	Auchincloss, Parker & Redpath	1	November
Pacific Gas & Elec.	Smith, Barney & Co.	2	October
Potomac Elec. Power	Paine, Webber, Jackson & Curtis	2	December
Public Service E. & G.	Fahnestock & Co.	1	November
Public Service E. & G.	Josephthal & Co.	2	December
Puget Sound P. & L.	Ira Haupt & Co.	1	November
Puget Sound P. & L.	Goodbody & Co.	2	November
San Diego Gas & Elec.	Josephthal & Co.	2	December
Southern Co.	Argus Research Corporation	2	November
So. Cal. Edison	Smith, Barney & Co.	2	October
So. Cal. Edison	Paine, Webber, Jackson & Curtis	2	January
So. Nat. Gas	American Securities Corporation	4	October
Washington Water Power	Smith, Barney & Co.	2	October
West Penn Elec.	Argus Research Corporation	2	December
Bulletins, Tables, and General Studies			
Current Developments in Utilities	Eastman, Dillon & Co.	10	December
Electric and Gas Common Stocks	Blyth & Co.	8	December
Electric Utilities—Higher Net Income Expected in '52	Shearson, Hammill & Co.	2	October
Electric Utility Operating Companies	Hemphill, Noyes & Co.	4	November
Monthly Review of Utility Developments	Josephthal & Co.	4	December
New Utility Bond and Preferred Offerings *vs.* Yields on Common Stocks	Goodbody & Co.	2	December
Public Utility Stocks	Ira Haupt & Co.	1	November
Public Utility Common Stocks	G. A. Saxton & Co., Inc.	2	December
Utility Company Common Stocks	White, Weld & Co.	6	November
Utility Stocks and the New Tax Bill	White, Weld & Co.	—	December
Utilities—A Glowing Growth Record	Paine, Webber, Jackson & Curtis	5	November

*Similar lists have appeared in the FORTNIGHTLY for November 22, August 2, April 26, and January 4, 1951; and in the October 12, June 22, March 30, and January 5, 1950, issues.

Location of the Depreciation Reserve

THE National Association of Railroad and Utilities Commissioners has for some time been considering the recommendation of its committee on statistics and accounts with respect to a change in the location of the depreciation reserve from its customary place above surplus account among the liabilities, to a position just below gross plant account

PUBLIC UTILITY SECURITIES SOLD IN 1950-51
(In Millions of Dollars)

	January 1 to December 31, 1951				*January 1 to December 31, 1950*			
	Electric	*Gas*	*Commun.*	*Total**	*Electric*	*Gas*	*Commun.*	*Total**
Classified by Securities, etc.								
Long-term Debt								
Offered Publicly	$ 773	$326	$ 40	$1,139	$ 828	$483	$282	$1,601
Offered by Subscription	—	—	415	415	—	—	—	—
Offered Privately	230	307	27	592	290	346	37	705
Total	$1,003	$633	$482	$2,146	$1,118	$829	$319	$2,306
Preferred Stock								
Offered Publicly	$ 116	$ 66	$ 28	$ 212	$ 283	$ 53	$ 9	$ 348
Offered by Subscription	50	—	—	50	3	17	1	21
Offered Privately	16	5	—	25	35	8	—	45
Total	$ 182	$ 71	$ 28	$ 287	$ 321	$ 78	$ 10	$ 414
Common Stock								
Offered Publicly	$ 107	$ 29	$ 20	$ 156	$ 125	$ 71	$ 5	$ 202
Offered by Subscription	238	67	49	355	245	54	38	339
Total	$ 345	$ 96	$ 69	$ 511	$ 370	$125	$ 43	$ 541
Total Financing	$1,531	$801	$581	$2,944	$1,810	$1,033	$373	$3,262
Classified As to Purpose								
Total Refundings	$ 30	$ 38	$ 3	$ 76	$ 478	$ 286	$ 74	$ 868
Total Divestments	6	—	—	6	86	70	—	156
New Money								
Long-term Debt	985	625	479	2,112	736	533	248	1,527
Preferred Stock	172	42	29	246	238	77	8	327
Common Stock	338	96	70	504	272	67	43	384
Total New Money	$1,495	$763	$578	$2,862	$1,246	$ 677	$299	$2,238
Total Financing	$1,531	$801	$581	$2,944	$1,810	$1,033	$373	$3,262
Classified by Method of Sale								
Competitive Bidding	$ 845	$300	$ 40	$1,184	$ 973	$ 419	$281	$1,681
Negotiated Sales	150	123	49	322	264	189	16	470
Subscriptions								
Competitive Bidding	45	21	—	66	20	—	—	20
Negotiated Sales	178	15	5	198	129	31	9	171
No Underwriting	65	30	460	556	99	40	30	169
Total Subscriptions	$ 288	$ 66	$465	$ 820	$ 248	$ 71	$ 39	$ 360
Private Sales	$ 248	$312	$ 27	$ 618	$ 325	$ 354	$ 37	$ 751
Total Financing	$1,531	$801	$581	$2,944	$1,810	$1,033	$373	$3,262

*Includes miscellaneous.
Source, Ebasco Services, Inc.

on the asset side of the balance sheet. In the latter position a third item, "net plant account," is usually added also. This new method has been advocated by the Federal Power Commission, which uses it in the composite balance sheet for all privately owned class A and B electric utilities, published annually. The new form is also used in some of the recent prospectuses filed with the SEC, and in some annual reports to stockholders. At first glance, the change of location would appear to have an advantage in so far as the security analyst is concerned, since it saves him an arithmetical computation in computing return on estimated rate base—assuming that the latter is the reported net plant plus working capital. In many cases, however, the rate base recognized by state regulatory authorities may be an entirely different figure—frequently a larger amount.

The change is opposed by the Edison Electric Institute and the American Gas Association, mainly on the ground that it is tied in with certain other proposals and implications which the FPC and certain elements of NARUC are anxious to force upon the industry, as follows:

(1) To change the definition of the term depreciation from the present "loss in service value" to "decline in service value," with service value of property defined as "consisting of its years of service or output during its service life."

(2) To require that the charge for depreciation shall be computed in accordance with the straight-line method applied on a group plan, with no provision for use of any other method for calculating depreciation.

THE FPC has long favored the straight-line method. In 1945, 132 electric utilities were using straight-line depreciation as compared with 121 using other methods, but based on the amount of electric plant the proportion using straight-line was only 37 per cent compared with 63 per cent using other methods. In 1949, 188 companies were using it *versus* 61 not using it, but based on plant account the proportions were 63 per cent and 37 per cent. Presumably the increase was due to the pressure from Federal commissions and some of the state commissions. NARUC should not be allowed to force this change on the remaining utilities without serious consideration of the issue, according to representatives of the EEI and AGA, who hold that the change in location of the reserve is an opening wedge to forcing the adoption of straight-line accruals.

A 20-page brochure on this topic has been prepared by a committee of accounting executives and copies may be obtained from Vice President Harold Scaff of Ebasco Services, Inc., 2 Rector street, New York city. We quote some of the conclusions reached by this committee:

> The electric and gas utilities believe that the present title of reserve for depreciation should be retained. . . . The expression "accrued depreciation" . . . is inappropriate since it is not sufficiently distinguished from "depreciation reserve requirement" which is ordinarily used to mean the amount that ought to be accumulated in the reserve at any given time on the basis of a given or required method of systematic allocation of cost. . . .
>
> The electric and gas utilities also believe that the reserve for depreciation account should be included with all other credit balance sheet accounts consistent with present practice. . . . The fact that deductibility of depreciation has become acceptable accounting practice in nonregulated industries is no reason for this practice to be adopted by regulated industries. The convention for showing the reserve on the credit side of the balance sheet of regulated utilities is of long standing and no new developments have taken place which require the change in account arrangement or balance sheet presentation. The arbitrary requirements for deducting the reserve for depreciation can only be interpreted as an attempt by the committee on statistics and accounts to establish through accounting a standard formula for rate determination which the courts and the legislatures have refused to adopt because of

the realization of the inaccuracy and unfairness of the end result.

Deduction of the depreciation reserve from the "original cost" of plant results in a monetary reduction in assets when in fact the reserve actually measures, in most instances, an additional investment in plant and an increase in the volume of physical assets employed in the business. Regulated electric and gas utility industries should not be required to submit statements that would contain such misrepresentation of material facts, which would be construed as serious admissions against interest, and which would be a strong influence toward the confiscation of their property. . . .

CURRENT UTILITY STATISTICS AND RATIOS

	Unit Cost	Latest Month	Latest 12 Mos.	Per Cent Increase Latest Month	Per Cent Increase Latest 12 Mos.
Operating Statistics (November)					
Output KWH—Total	Bill. KWH	32.1	367.8	11%	13%
Hydro-generated	"	8.1	—	5	—
Steam-generated	"	24.0	—	12	—
Capacity	Mill. KW	75.2	—	11	—
Peak Load (October)	"	63.4	—	11	—
Fuel Use: Coal	Mill. Tons	9.7	—	11	—
Gas	Mill. MCF	53.7	—	12	—
Oil	Mill. Bbls.	5.9	—	D4	—
Coal Stocks	Mill. Tons	39.4	—	22	—
Customers, Sales, Revenues, and Plant (October)					
KWH Sales—Residential	Bill. KWH	4.5	56	11%	14%
Commercial	"	3.7	44	8	10
Industrial	"	11.8	133	9	16
Total, Incl. Misc.	"	26.8	310	8	12
Customers—Residential	Mill.	29.8	—	4	—
Commercial	"	4.3	—	1	—
Industrial	"	.6	—	3	—
Total	"	36.9	—	4	—
Income Account—Summary (October)					
Revenues—Residential	Mill. $	134	1,609	9%	11%
Commercial	"	101	1,190	7	8
Industrial	"	130	1,464	10	14
Total, Inc. Misc. Sales	"	403	4,705	8	11
Sales to Other Utilities	"	35	391	4	5
Misc. Income	"	10	203	11	5
Expenditures					
Fuel	"	79	844	13%	14%
Labor	"	86	1,000	10	11
Misc. Expenses	"	66	785	—	3
Depreciation	"	39	468	8	10
Taxes	"	97	1,107	21	23
Interest	"	24	276	8	8
Amortization, etc.	"	2	22	82	2
Net Income	"	54	796	D11	D2
Preferred Div. (Est.)	"	10	117	4	6
Bal. for Common Stock (Est.)	"	44	679	D14	D2
Common Dividends (Est.)	"	44	532	8	8
Balance to Surplus (Est.)	"	Nil	147	—	D9
Electric Utility Plant (October)	"	$20,357	—	9%	—
Reserve for Deprec. and Amort.	"	4,170	—	8	—
Net Electric Utility Plant	"	16,187	—	10	—
Life Insurance Investments (January 1st-December 29th)					
Utility Bonds	"	—	732	—	D41%
Utility Stocks	"	—	63	—	D62
Total	"	—	795	—	D44
% of All Investments	"	—	870	—	D55

RECENT FINANCIAL DATA ON GAS COMPANY STOCKS

1950 Rev. (Mill.)			1/9/52 Price About	Indicated Dividend Rate	Approx. Yield	Share Earnings # Current Period	% Increase	Freq. Of Reports**	Price-Earn. Ratio	Div. Payout
		Producers and Pipeline Companies								
$ 7	O	Commonwealth Gas	15	$ .25	1.7%	$ .74d	19%	a	—	20
23	S	Mississippi Riv. Fuel ...	35	2.20	6.3	3.31s	13	qy	10.6	60
—	O	Missouri-Kans. P. L. ...	60	1.60	2.7	1.66d	D62	a	—	96
37	S	Southern Nat. Gas	48	2.50	5.2	4.11s	17	qy	11.7	61
2	O	Southwest Nat. Gas	8½	.20	2.4	.45s	61	bq	—	44
53	O	Tenn. Gas Trans.	27	1.40	5.2	1.79s	D3	qy	15.1	78
74	O	Texas East. Trans.	19	1.00	5.3	1.93d	30	a	9.8	52
31	O	Texas Gas Trans.	18	—	—	1.97s	30	a	9.1	—
		Averages			4.1%				11.3	
		Integrated Companies								
81	S	American Natural Gas ..	33	$1.80	5.5%	$2.66s	48%	bq	12.4	60
160	S	Columbia Gas System ..	16	.90	5.6	1.20s	4	qy	13.3	75
135	S	Consol. Nat. Gas	59	2.50	4.2	5.58s	19	qy	10.6	45
39	S	El Paso Nat. Gas	37	1.60	4.3	3.24n	98	my	11.4	49
26	S	Equitable Gas	21	1.30	6.2	1.82s	D15	bq	11.5	71
13	O	Interstate Nat. Gas	35	2.50	7.1	3.25d	30	a	10.8	77
8	O	Kansas-Neb. Nat. Gas ..	23	1.24	5.4	1.95d	20	qc	11.8	64
52	C	Lone Star Gas	26	1.40	5.4	1.72s	D20	mqy	15.1	81
15	S	Montana-Dakota Utils. ..	23	.90	3.9	.79s	D23	qy	—	114
9	O	Mountain Fuel Supply .	20	.70	3.5	.99d	9	a	20.2	61
36	C	National Fuel Gas	13	.80	6.2	1.21s	1	bq	10.7	66
3	O	National Gas & Oil	8	.40	5.0	1.04d	68	a	7.7	38
33	S	Northern Nat. Gas	39	1.80	4.6	1.62s	D26	qy	24.1	111
22	C	Oklahoma Nat. Gas	35	2.00	5.7	2.81o	D4	b	12.5	71
16	C	Pacific Pub. Serv.	15	1.00	6.7	2.23d	7	qc	6.7	45
41	S	Panhandle East. P. L. ..	60	2.00	3.3	2.82s	6	qy	21.3	71
86	S	Peoples Gas Lt. & Coke .	134	6.00	4.5	8.36s	D17	qy	16.0	72
14	O	Southern Union Gas	24	.80	3.3	1.51d	13	qc	15.9	53
107	S	United Gas	25	1.00	4.0	1.52s	9	qy	16.4	66
		Averages			5.0%				13.8	
		Retail Distributors								
21	O	Atlanta Gas Light	22	$1.20	5.5%	$2.00je	D10%	bq	11.0	60
4	C	Bridgeport Gas	24	1.40	5.8	1.47d	D22	a	16.3	95
2	O	Brockton Gas Lt.	8	.56	7.0	.58d	D2	a	13.8	97
42	S	Brooklyn Union Gas	51	3.30	6.5	4.16s	14	qc	12.3	72
18	O	Central El. & Gas	10½	.80	7.6	.95s	D11	qy	11.1	84
7	C	Consol. Gas Util.	12	.75	6.3	1.56o	5	qy	7.7	48
5	O	Hartford Gas	36	2.00	5.6	2.68d	—	a	13.4	75
1	O	Haverhill Gas Lt.	34	1.80	5.3	2.02n	6	my	16.8	89
7	O	Houston Nat. Gas	19	.80	4.2	1.49ju	41	a	12.8	54
8	O	Indiana Gas & Water ...	23	1.40	6.1	2.04n	9	c	11.3	69
1	O	Jacksonville Gas	33	1.40	4.2	4.97d	4	a	6.6	28
5	C	Kings County Ltg.	9	.40	4.4	.45d	D30	qc	20.0	89
21	S	Laclede Gas	9	.50	5.6	.89s	11	b	10.1	56
2	O	Michigan Gas Utils.	12	—	—	1.11s	54	qy	10.8	—
16	O	Minneapolis Gas	21	1.10	5.2	1.22s	15	qy	17.2	86
5	O	Mobile Gas Service	30	1.60	5.3	2.82s	D17	bq	10.6	57
5	O	New Haven Gas Lt.	26	1.60	6.2	1.92d	13	a	13.5	83
115	S	Pacific Lighting	52	3.00	5.8	3.53s	D16	bq	14.7	85
6	O	Providence Gas	9	.40	4.4	.57d	2	a	15.8	88
2	C	Rio Grande Valley Gas .	2	.12	6.0	.20je	10	qy	10.0	60
1	O	Rockland Gas	35	1.70	4.9	4.63d	5	a	7.6	37
5	O	Seattle Gas	15	.60	4.0	1.36s	4	qy	11.0	44
4	O	Springfield Gas Light ...	34	1.60	4.7	1.64d	—	—	20.7	98
22	S	United Gas Improv.	32	1.55	4.8	2.29oPF	—	qy	14.0	68
23	S	Wash. Gas Light	26	1.50	5.8	2.54s	10	bq	10.2	59
		Averages			5.4%				12.8	

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER COMPANIES

1950 Rev. (Mill.)			1/9/52 Price About	Indicated Dividend Rate	Approx. Yield	Share Earnings # Current Period	% Increase*	Freq. Of Reports**	Price-Earn. Ratio	Div. Payout
		Communications Companies								
		Bell System								
$3,261	S	Am. Tel. & Tel. (Cons.)	155	$9.00	5.8%	$11.59ag	19%	mcy	13.4	71
26	O	Cinn. & Sub. Bell Tel. ..	73	4.50	6.2	4.59d	D4	qc	15.9	98
92	C	Mountain Sts. T. & T. ..	101	6.00	5.9	6.48s	D8	qy	15.6	93
191	C	New England Tel.	109	8.00	7.3	7.33s	2	qy	14.9	109
431	S	Pacific Tel. & Tel.	109	7.00	6.4	8.19s	—	qy	13.3	85
55	O	So. New Eng. Tel.	35	1.80	5.1	2.12d	18	qc	16.5	85
		Averages			6.1%				14.9	
		Independents								
7	O	Central Telephone	11	$ .80	7.3%	$1.32s	35%	qy	8.3	61
70	S	General Telephone	31	2.00	6.5	2.57o	58	qy	12.1	78
9	C	Peninsular Tel.	40	2.50	6.3	3.77s	D10	c	10.6	66
12	O	Rochester Tel.	12	.80	6.7	1.52d	69	qc	7.9	53
		Transit Companies								
7	O	Chicago SS. & S. B.	11	$1.00	9.1%	$1.67d	84%	qc	6.6	60
13	O	Cinn. St. Ry.	6	.30	5.0	.19d	D77	a	—	158
9	O	Dallas Ry. & Term.	13	1.40	10.8	1.76d	27	a	7.4	80
184	S	Greyhound Corp.	12	1.00	8.3	1.19s	3	qy	10.1	84
22	O	Los Angeles Transit	5	.50	10.0	.51d	D39	qc	9.8	98
29	S	Nat. City Lines	10	1.00	10.0	1.90d	9	qc	5.3	53
25	O	St. Louis P. S. A	9	.50	5.6	.41d	D15	qc	—	122
4	O	Syracuse Transit	19	2.00	10.5	2.89d	366	a	6.6	69
		Averages			8.7%				7.8	
		Water Companies								
		Holding Companies								
26	S	Amer. Water Works	9	$ .50	5.6%	$ .90s	D11%	qy	10.0	56
4	O	N. Y. Water Service ...	30	.80	2.7	1.92s	18	qy	15.6	42
		Operating Companies								
3	O	Bridgeport Hydraulic ..	30	$1.60	5.3%	$1.45d	D8%	a	20.7	110
7	O	Calif. Water Serv.	28	2.00	7.1	2.42n	2	b	11.6	83
1	O	Elizabethtown Water ...	90	6.00	6.7	6.96d	D17	a	12.9	86
6	S	Hackensack Water	33	1.70	5.2	2.73d	2	qc	12.0	62
3	O	Jamaica Water Supply ..	22	1.50	6.8	2.09s	19	qy	10.5	72
2	O	New Haven Water	53	3.00	5.7	3.25d	D6	a	16.3	92
1	O	Ohio Water Service	21	1.50	7.1	1.94s	10	bq	10.8	77
4	O	Phila. & Sub. Water	36	.80	2.2	3.06d	D12	a	11.8	26
1	O	Plainfield Union Wt. ...	46	3.00	6.5	4.16d	D18	q	11.1	72
2	O	San Jose Water	32	2.00	6.3	2.48n	D13	b	12.9	81
6	O	Scranton-Spring Brook .	13	.90	6.9	.94s	D18	qy	13.8	96
3	O	Southern Cal. Water ...	8	.65	8.1	.83m	8	qy	9.6	78
1	O	Stamford Water	53	2.00	3.8	2.10d	D11	a	25.2	95
2	O	West Va. Wt. Service ..	23	1.20	5.2	1.37s	12	bq	16.8	88
		Averages			5.9%				14.0	

D—Deficit. C—Curb exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. *Increase in balance for common stock. #Earnings are calculated on present number of shares outstanding, except as otherwise indicated. PF—*Pro forma.* d—December, 1950. m—March. je—June. ju—July. ag—August. s—September. o—October. n—November. NC—Not comparable. **The following symbols are used in this column to indicate the periods and frequency of earnings reports: a—Calendar year only. b—Twelve months only (reported monthly). bq—Twelve months only (reported quarterly). c—Cumulative months and twelve months. mc—Latest month and cumulative months. mcy—Latest month, cumulative months, and twelve months. mqy—Latest month, three months, and twelve months. my—Latest month and latest twelve months. q—Latest quarter only. qc—Quarters cumulatively. qy—Latest quarter plus last twelve months.

What Others Think

OPS on Utility Rate Case Intervention

On November 29, 1951, Chairman Maybank (Democrat, South Carolina), of the congressional joint ("watchdog") committee on the Defense Production Act, asked Michael DiSalle, Administrator of the Office of Price Stabilization, to explain the activity of OPS in utility rate cases. It was pointed out that OPS had interested itself not only in cases involving wholesale utility service, but also some others (such as telephone and transit cases) involving retail utility rate.

The reply of Administrator DiSalle, received just before the end of the year, is of interest to all utilities and regulatory agencies. He stated, as regard to OPS authority:

> As you know, § 402(e)(v) of the Defense Production Act requires public utilities selling for resale to the public to give the President thirty days' notice of rate increases and to consent to his intervention in proceedings before regulatory agencies considering such increases.
>
> Even without § 402(e)(v), the President (or OPS), as the representative of the government of the United States, would have the inherent right to request permission to be heard by a judicial or quasi judicial body regarding a matter of importance to the discharge of his duties. (See Vinson *v.* Washington Gas Light Co. 321 US 489, 499.) As you may recall, the OPA exercised this right in several instances prior to the passage of the Stabilization Act of 1942, which gave the OPA the right to receive notice and prevented the utility or carrier from objecting to OPA intervention. These notice and consent provisions were inserted to give the Price Administrator additional rights in addition to his general right to ask consent or permission to intervene. (See 321 US at 498.)
>
> The effect of § 402(e)(v) was to put certain limitations on the authority of the state commissions. Although under state law a commission may have the right to permit rate increases to be put into effect immediately, and without notice, as in certain emergency situations, that right is limited for the utilities covered by the proviso of 402(e)(v). A 30-day waiting period is superimposed. Ordinarily the utility could offer for consideration by the commission, objections to intervention by the government agency. Utilities covered by the proviso to 402(e)(v) may not offer such an objection.
>
> However, there would not seem to be any implication that the additional rights granted to the President by the proviso to 402(e)(v) take away the general right to seek leave to intervene in cases not within that proviso. The Federal agency could, for example, apply under a state law as an interested person seeking leave to become a party. Since the matter is one entirely within the discretion and subject to the judgment of the state commission involved, there is no problem of overriding the judgment or authority of state agency.

It was noteworthy, however, that OPS has decided, as a general rule, to stay out of utility rate cases which do not involve wholesale services. It retains the right, as a matter of discretion, to seek permission to intervene in exceptional retail rate situations. DiSalle's letter stated on this point:

> However, as a matter of administrative policy, we have limited our inter-

ventions to selected cases within the proviso of 402(e)(v); *i.e.*, of common carriers and wholesale public utility companies. We have taken into account limitations of staff, the existence in this area of state regulatory commissions, and the fact that Congress, while not modifying the general right of OPS to seek leave to intervene in retail utility cases, has been unwilling to pass notice and consent provisions which would facilitate appearance by OPS but also provide limitations on the authority of the state agencies.

Thus, it is generally our present policy not to seek intervention in cases outside the proviso of 402(e)(v). But if, in any such case, we believe it important to the stabilization effort as a whole to bring our views and data to the attention of any state commission, we will, you may rest assured, in no way engage in or be a party to dilatory tactics. We realize that the regulatory state agencies have been established to further the public interest, and have objectives common or closely related to those of the stabilization effort. We believe that the regulatory agencies before whom we have participated, both Federal and state, have considered our activity entirely within the bounds of propriety and comity. Indeed, a number have welcomed us cordially and have invited us to appear in future cases.

As of January 15, 1952, OPS had intervened formally in about 20 utility rate cases—nine of these being before the Federal Power Commission on natural gas rate increase proposals.

Japanese Power Review

THE *Nippon Times*, an English language daily, reports that Japan is suffering from an acute electric power shortage. According to Supreme Commander Allied Powers' economic and scientific section, there are four principal reasons.

First is the current drought. Decline in rainfall has caused a major reduction in streamflow for hydroelectric generation, particularly on the island of Honshu. This decline began late in July, 1951. At that time the streamflow for all Japan was 121 per cent of the 9-year average. But since then it has declined with only a short period of minor relief until, for the week of October 4th-10th, it was only 63 per cent for Honshu and 67 per cent for all Japan, nearly an all-time low.

The *Times* further reports that the second major cause for power shortage in Japan at this time is the coal shortage. The electric power companies permitted their coal stockpiles to reach critically low levels prior to the drought. They have since been unable to procure coal to adequately meet increased daily requirements caused by the drought. However, thermal generation for all Japan for the week of October 1st-7th of this year was 131,017,000 kilowatt hours, an increase of 44,424,000 kilowatt hours, or 51.3 per cent, over the like period last year.

But this increased thermal generation was inadequate to offset a decline in hydrogeneration of 165,035,000 kilowatt hours, or 24.3 per cent, with the result that there was a weekly shortage of 120,611,000 kilowatt hours when measured against the 764,995,000 kilowatt hours generated for the same week last year, a net decline of 15.8 per cent.

However, thermal generating capacity of about 115,000,000 kilowatt hours per week is not being used because of lack of coal. It is obvious that if sufficient coal were available to utilize idle capacity, power generation could be increased by about 115,000,000 kilowatt hours per week, leaving a shortage of only about 5,611,000 kilowatt hours, less than three-fourths of one per cent (0.73 per cent). The power companies deserve credit, however, for having increased coal purchases 75 per cent the year ending August, 1951.

For the same period coal consumption

increased from 2,826,000 to 6,028,000 tons, an increase of 113 per cent. Unfortunately, coal stockpiles were diminished during this 12-month period from 814,000 to a critically low level of 199,000 tons. This decline in stockpiles began in May, 1950, a year prior to reorganization of the electric power industry, and has continued practically unabated.

The article goes on to say that normally December to March is the period of heaviest coal consumption for thermal electric power generation in Japan. Stockpiles should be at a maximum of about 1,200,000 tons not later than December 1st each year. On this date in 1950 they were about 725,000 tons. It is normal for stockpiles to decline because of increased thermal generation from December 1st to March 31st with about one month's requirements remaining on hand on the latter date. But beginning in April, stockpiles should again start increasing so as to be built up to a maximum by not later than the following December 1st.

A THIRD major factor in the current power shortage, according to the *Times* report, is the fact that electric power consumption has increased substantially over last year. For the first seven months of calendar year 1951 the total electric consumption exceeded the same period for 1950 by 2,560,000,000 kilowatt hours, or 15.6 per cent. This load increase has resulted from increased orders to Japanese industries for materials and supplies needed for United Nations forces in Korea, as well as from natural growth accompanying economic recovery and a growing population.

The greatest increase has occurred among the commercial and industrial power consumers. Consumers with loads of 500 kilowatts and greater increased their consumption 25.7 per cent, whereas consumers under 500 kilowatts increased consumption only 11.4 per cent. The largest increase, 49.9 per cent, was the textile industry, which consumed about 3.2 per cent of total kilowatt hours sold. Other industries which increased consumption sharply were primary metals and chemicals. Residential use, which consumes 22.1 per cent of total kilowatt hours sold, decreased 4.2 per cent.

According to the *Times*, the final, and most important, factor in the current power shortage is inadequate construction of new facilities. Construction of new electric generating capacity and corollary transmission and distribution facilities has not kept pace with growing consumer load. Comparing the Japanese fiscal year 1950 with 1946, the following is evident:

(1) Consumption in kilowatt hours has increased from 20.9 to 29.9 billion, an increase of 43 per cent.

(2) Peak load has increased from 4,600,000 to 6,600,000 kilowatts, an increase of 44 per cent.

(3) Installed generating capacity has increased from 8,500,000 to 8,700,000 kilowatts, or an increase of less than 3 per cent.

SUCH large increase in consumption and peak load with such an insignificant increase in generating capacity has been possible because of greater use of existing facilities. The hours in use per year of maximum generating capacity have increased from 54.8 per cent in 1946 to 66.2 per cent in 1950 for hydro, and from 3.6 per cent to 24 per cent for thermal generation. Such high utilization of hydrogeneration in 1950 was possible only because of extremely favorable streamflow, and exceeds normal expectancy.

The following are possible remedies which members of SCAP's economic and scientific section believe, if put into practice, might possibly alleviate this critical situation:

Firstly, while man has no control over droughts, some electric power companies (notably Tokyo and Kansai) are considering cloud seeding to artificially induce rain or snow. Conditions are considered favorable in Japan for seeding clouds which naturally accumulate around peaks high enough to chill moisture-laden air.

Other than that, indications are that a prolonged drought has again hit Japan. Severe droughts occurred in 1939, 1942, and 1947, a 3- to 5-year cycle. This is

the fourth year since the last severe drought in 1947. The drought may continue throughout the fall and winter, or until relieved by snow thawing and spring rains. Some relief may be secured by reducing periods of inoperation of hydro plants through speeding of repairs and preventive maintenance.

Secondly, there are two major fuels for thermal plant generation — coal and oil. Increased coal for electric power generation may come from increased indigenous production, importation, or through curtailment of deliveries (voluntary or compulsory) to other industries and diversion to electric power. Oil may be used in small quantities to enrich low-calorie coal, or in large quantities as an independent fuel. Imports of coal or oil require expenditure of scarce dollar foreign exchange. Most desirable solution is increased production of Japanese coal.

Thirdly, power now available should be put to better use. Considerable extravagance and waste now exist. Electric power, because of its relative cheapness, has in some instances displaced other forms of fuel or energy. Further rate increases would tend to reduce such abnormal usages. In addition to voluntary restrictions, the public utility commission, of necessity, must impose such mandatory restrictions as will bring the load down to the supply capability. As the supply diminishes or the consumers' requirements increase, relatively more severe restrictions must be imposed. The occupation forces are co-operating in electric power conservation by elimination of nonessential use.

Lastly, major construction projects cannot be started now and completed in time to be of benefit during the present drought. But new construction is needed. It should have been started one or two years ago. SCAP approved 45 new power plant construction projects in 1949, but only 12 have been completed and 17 have not yet been started.

THE Japanese have failed to raise funds to finance new power facilities. They have relied almost exclusively on Counterpart Aid Fund loans, which have been authorized in the amount of 35 billion yen for the years 1949, 1950, and 1951 for all nine power companies. Each company, however, should have been spending approximately that amount of its own funds for new construction. Instead the companies have sat idly waiting for "foreign investments" to come to them for financing new construction. They have waited too long and they have been caught short. The time has come when greater expansion of power facilities must be started and rushed to completion to meet the growing load or the Japanese must reconcile themselves to a perpetual power shortage.

The review points out that opponents of the recent reorganization of the electric power industry and the proponents of other forms of organization and control are citing the present stringent power situation as proof that the existing plan under which nine power companies, organized under private ownership and management to provide an integrated service has failed.

Water Pollution Abatement

CONTINUED progress of the spreading campaign to curb pollution of rivers and other waters through the construction of industrial waste and municipal sewage treatment facilities is revealed by a survey of reports from state capitals throughout the nation, and compiled by Bethune Jones of Red Bank, New Jersey.

In Pennsylvania, for example, more than $150,000,000 has been and is being spent for sewage and industrial waste treatment works since the state's clean streams program was started in 1944, according to announcement by Dr. Russell E. Teague, secretary of the State Health Department.

"This money," Dr. Teague said, "is probably equally divided between sewage treatment works and industrial water systems. In this latter field, the advance

"HE WAS TRYING TO GIVE THE TELEPHONE A DRINK OF WATER"

is most notable, proceeding even faster than in the municipal field. Industry was slow to start, but once the work was begun it has proceeded rapidly."

Rejected by the Pennsylvania legislature just before the December adjournment of its 1951 session was a bill which would have delayed enforcement of clean-stream orders against municipalities and industries. The Pennsylvania lawmakers earlier last year enacted a law permitting the State Department of Forests and Waters to enter into contracts with any agency of the Federal government and the Pennsylvania General State Authority in connection with stream clearance and flood-control projects.

UTAH's State Legislative Council announced plans for the creation of a 7-man committee to study types of anti-pollution legislation. Meanwhile, a citizens' advisory committee was named to aid with preliminary studies of a proposed $8,000,000 sewage disposal program for Salt Lake City.

Many major municipal sewage treatment projects are being constructed in California, where, for example, the Orange County Sanitation District called for bids January 23rd on $8,308,000 in bonds for a new county-wide sewage system.

Another significant antipollution step in California was San Diego's recent

completion of the first phase of a $60,000 research program into the best means of handling the metropolitan area sewage disposal problem. The Regional Water Pollution Control Board there estimates almost $20,000,000 of new sewage disposal construction is needed to accommodate anticipated future needs in the area.

California fish and game officials are calling for co-operation in carrying out a new state law which provides for removal of log jams and any other form of débris which would prevent fish from going upstream to spawn or would pollute the water.

Wisconsin's Supreme Court has upheld the State Committee on Water Pollution's authority to carry out pollution-abatement orders. Constitutionality of a committee order had been challenged by the Madison Metropolitan Sewerage District.

ILLINOIS has a new State Water Pollution Control Advisory Council, the creation of which was authorized by the 1951 state legislature to work with the State Sanitary Water Board in prevention and abatement of stream pollution. The advisory group's six members represent industry, agriculture, public health, wildlife, municipal government, and the public at large.

New York city is carrying out an overall program of sewage treatment works construction which will provide for treatment of all of the city's sewage by the end of 1959. Only 41 per cent of the city's sewage now is treated through seven modern plants with a capacity of 456,500,000 gallons daily. The $325,000,000 construction program now in progress will increase this capacity by 971,000,000 gallons daily.

Rhode Island's pollution abatement program moved a step forward with the recent opening of one of the key facilities in the multimillion-dollar Blackstone Valley Sewer District project. Opening of further facilities is expected early this year.

Industries have been co-operating voluntarily in the efforts to clean up Narragansett Bay by building waste treatment facilities, according to Walter J. Shea, chief of the sanitary engineering division of the Rhode Island State Health Department. He added that petroleum companies have reduced oil leakage in the bay.

Connecticut's State Water Commission recently announced pledges by representatives of 30 major eastern oil companies to do their utmost to end pollution in that state's coastal and inland waters. Aiding these efforts is a new code which the state oil industry drafted for pollution control. This code is described as the first of its kind in the country.

IN pressing Ohio's water pollution abatement program, State Attorney General C. William O'Neill recently cited 25 industrial firms in 20 counties to cease pollution of streams or face prosecution under the state's new antipollution law. He earlier ordered 30 Ohio cities to start plans for sewage treatment facilities.

Fred H. Waring, chief sanitation engineer of the Ohio State Health Department, disclosed that 28 Ohio municipalities have installed new sewage treatment works since the end of World War II, but that there remain 98 municipalities in the state of more than 2,000 population which have either no sewage works or unsatisfactory ones.

The newly created Ohio State Water Pollution Control Board was granted a $45,780 appropriation for the remainder of the current fiscal year. Of these funds, $31,100 was earmarked for a mobile laboratory unit for use in spot checking streams.

The Delaware Water Pollution Commission is making detailed scientific studies of river basins in the state, with recommendations for steps by both industries and municipalities to curb pollution.

It will take another ten years to halt pollution of Indiana rivers, on the basis of progress made during 1951, it was estimated by B. A. Poole, director of the State Health Board's sanitation division. Materials shortages and higher prices are impeding corrective steps, he reported, although significant progress is being

made by both municipalities and industries.

ANTIPOLLUTION orders are continuing to be issued against industries and municipalities in Michigan by the State Water Resources Commission, which has been waging an aggressive campaign to clean up the state's waters.

An initiative petition for an Idaho law to compel dredging operators to smooth over disturbed ground and replace water courses will be sponsored by the Idaho Wildlife Federation.

The 8-state Ohio Valley Water Sanitation Commission, established through a 1948 interstate compact to foster a regional pollution abatement program, plans a series of hearings early this year involving communities between Huntington and Cincinnati.

—D. T. B.

Notes on Recent Publications

HOW MUCH GOVERNMENT DOMINATION IN THE IMMEDIATE FUTURE? This and many other timely questions are answered in a 200-page book written by Sumner H. Slichter, Harvard University economist. Slichter analyzes the changes in American industrial climate that have taken place since 1900. Particularly, he examines the defense economy and probes into the very important question of whether the power of the government over business will be permanently increased by the emergency control machinery and its aftermath. How long the defense economy is to last and what are the likely developments in the years ahead, are two of the important questions upon which this eminent economist ventures an opinion. Others are: Will government expenditures and taxes continue to grow faster than production? Will the economy be less subject to booms and depressions? How will the great power of trade unions affect their policies and behavior? Are they likely to sponsor a labor party? Is the economy capable of growing fast enough to provide jobs for the increasing labor force? What will be the position of the American economy in world economic affairs? Can we have defense production and an adequate civilian economy at one and the same time? What is likely to be the future organization of the economy? Is private enterprise on the way out?

Is the government going to dominate economic activities more and more completely and eventually develop into some form of planned economy that will displace Capitalism? The views expressed on these questions indicate that Dr. Slichter has a profound faith in the strength and resilience of the American enterprise system. You will want to read this book: WHAT'S AHEAD FOR AMERICAN BUSINESS by Sumner H. Slichter. Published by Little, Brown & Company in association with the Atlantic Monthly Press, Boston, 1951. Price, $2.75.

ADULT EDUCATION ON CAPITALISM. This is the purpose of a new volume in the Economic Handbook series edited by Seymour E. Harris of Harvard University. The author of this volume on Capitalism, the fifth of the series, is David McCord Wright, professor of economics and lecturer in law at the University of Virginia. Wright has analyzed the capitalist system, examined its assets and liabilities, defined it, and takes up a consideration of how it may be expected to function under modern conditions. He defines it as "a system in which, on the average, much the greater portion of economic life, and particularly of net new investment, is carried on by private (*i.e.*, nongovernment) units under conditions of active and substantially free competition, and, avowedly at least, under the incentive of a hope for profit."

Wright does not treat Capitalism exclusively from an economic standpoint. To him it is very essential in a free culture and free way of life. It is his belief that Capitalism is likely to be more productive and more democratic in the long run, so long as it retains the competitive element. The author abhors schemes for a planned and controlled Capitalism wherein business firms agree among themselves to fix output and divide markets. This, he says, defeats moral justification.

The author recognizes that the Achilles Heel of the system is the recurrent fear of a repetition of the great depression. But he is convinced that our capitalist framework need not be scrapped to prevent such a possibility. Wright expresses the fear that leftist prejudices and misconceptions may result in psychological attitudes and legislative decisions that will make the system unworkable. In speaking of raids upon the Federal Treasury by special groups, he states: "Piracy pays when pirates are few and nonpirates many." He is hopeful that as piracy becomes more the rule than the exception it will become less profitable. CAPITALISM, by David McCord Wright. McGraw-Hill Book Company, New York, 1951. Price, $3.25.

The March of Events

In General

Agreement Set on Gas Rate Rise

THE Tennessee Gas Transmission Company and its wholesale customers have reached a "generally satisfactory agreement" on rates intended to increase the company's revenue by $11,400,000 annually.

An attorney for the Federal Power Commission, reporting this on January 11th, said the schedule called for increases of 2.6 per cent in the New York zone to 20.2 per cent in the central zone.

The agreement will resolve most issues—"maybe all of them"—the attorney told Chief Examiner Frank A. Hampton.

The report was made at the opening of a hearing which had been recessed to allow conferences between the company and its customers on distribution of the over-all rate increase approved by the commission. The commission authorized the rate increase on December 26th and ordered the rate schedule filed by January 11th. The new rates are retroactive to December 17th. The company had sought an $18,000,000 increase.

Power Expansion Held Off Balance

AN official committee of power experts has notified the government that its program of electric power expansion for defense is geographically off balance and "may be too small." The group recommended a restudy of expansion plans to work out a "realistic" program for the next three years.

The Defense Production Administration, which created the committee last September at the time of the power and aluminum crisis in the Pacific Northwest, issued a summary of the report on January 11th. The DPA said it had reached no decision on the recommendations.

The committee predicted power deficits in some areas and surpluses in others if the program is not changed. It urged that some generating equipment already on order be diverted to regions where it said the need is more urgent.

The report noted that the Great Lakes and Gulf areas particularly will have bigger defense loads and tighter power supply. It said in the Northeast and the Far West—except for the Northwest, where some aluminum plants were shut down in last fall's drought—"the prospect is for increased surplus."

These geographic maldistributions of new capacity should be corrected, the committee said.

The 4-member committee was headed by Edward W. Morehouse, vice president of General Public Utilities Corporation, New York city. The other members were Ralph Booth of Jackson & Moreland, engineers, Boston; Herbert Marks, Washington attorney, former counsel on power to the War Production Board; and G. O. Wessenauer, power manager of the Tennessee Valley Authority.

Gasification Conference Postponed

THE Interior Department recently announced that an international conference on underground gasification of coal, scheduled to be held at Gorgas and Birmingham, Alabama, January 28th to

30th, has been postponed to February 12th to 14th.

Scientists from Germany, Italy, Britain, France, Belgium, and possibly other countries will study the new process of coal use developed by the department's Bureau of Mines and the Alabama Power Company. They will visit this country under the Mutual Security Agency technical assistance program.

Officials said the postponement was the result of delays incurred in processing the travel arrangements of the scientists in the MSA Paris headquarters.

Proposed Long-distance Rate Changes Announced

It was announced on January 14th by the Federal Communications Commission that the American Telephone and Telegraph Company and the associated companies of the Bell system will soon file revised tariff schedules providing for both increases and reductions in interstate long-distance telephone rates, to become effective on March 1, 1952. The proposed rate changes will produce for the Bell system additional interstate gross revenue estimated at $14,000,000 annually, which is the net effect (after settlements with non-Bell connecting companies) of increases amounting to $22,250,000 and reductions amounting to $7,750,000.

The additional interstate revenue is intended to compensate the Bell system companies for about half the amount of costs which have been transferred from their intrastate to interstate telephone operations by modifications of cost allocation procedures recently proposed by the Federal Communications Commission and accepted by the National Association of Railroad and Utilities Commissioners. The balance of the transferred costs is being absorbed by the Bell system out of its interstate earnings, resulting in a savings in the nation's bill for all telephone services of more than $15,000,000 annually.

The cost allocation modifications already have provided the basis for reduction in the amounts of additional revenues being requested in most states by Bell system companies in the form of exchange and intrastate toll rate increases. The revised allocations have also been the basis for the postponement ordered on November 21, 1951, by the Federal Communications Commission in its pending investigation of interstate long-distance rates.

The proposed interstate rate increases will be made at the shorter distances. Thus, there will be increases of 5 cents in day station-to-station initial period rates for most distances within 150 miles, with 5- or 10-cent increases in day person-to-person initial period rates at all but a few distances within 582 miles.

Sign Contract for Electrification Expansion

An agreement was signed recently in Washington, D. C., by which the International Bank for Reconstruction and Development made a $29,700,000 loan for electric power development in Mexico.

The loan will be used to finance imports of equipment and materials required for seven major projects in the 1952-55 construction program of Mexico's Federal power commission.

The loan was the third advance for power purposes made by the bank to Mexico. In 1949 it loaned $24,100,000 to the commission Federal De Electricidad, which was the borrower in the recent loan. In 1950, it loaned $26,000,000 to the privately owned Mexican Light & Power Company, Ltd.

The bank said that additional electric power is essential to support the rapid development of industry and agriculture which now are taking place in Mexico.

The new loan will assist in financing two hydroelectric plants, four steam-electric stations, and the extension of distribution facilities. The projects are widely scattered, extending from Lower California to Mexico and to Yucatan.

The loan is for a term of twenty-five years and bears interest at the rate of 4½ per cent a year. The interest rate includes the 1 per cent commission which the bank's articles of agreement require it to allocate to its special reserve.

District of Columbia

Asks Boost in Rate of Return

THE Washington Gas Light Company is requesting that its allowable rate of return in the District be boosted from 6 to 7 per cent. This was brought out in exhibits presented by Vice President Ritenour, as hearings on the company's requested 15 per cent increase in District gas rates got under way early this month before the District of Columbia Public Utilities Commission.

Ritenour said the proposed rate increase would yield $2,344,000 in a year. This would produce a 7 per cent return on the company's investment in plant servicing the District, he said. The commission last ruled on rate of return for the gas company in 1945. At that time it said 6 per cent was a fair and reasonable return. According to the company's attorney, C. Oscar Berry, the company had not earned as much as 6 per cent since 1946 and would earn an estimated 3.9 per cent return this year under existing rates.

At the start of the hearing, Company President Everett J. Boothby described the company as being "caught in a squeeze" between the Federal Power Commission and the District commission.

The company last November asked for a 15 per cent rate boost. Mr. Boothby explained that a major basis of the company's claim is the rise in the wholesale cost of natural gas. He said the wholesale supplier, Atlantic Seaboard Corporation, ordered a $1,000,000 rate increase last fall. The wholesaler, moreover, has indicated it will raise existing rates another $800,000 next March, Mr. Boothby added.

Michigan

Utility Executive Program To Be Repeated

THE public utility executive program, offered for the first time last summer by the University of Michigan School of Business Administration, will be repeated this summer during the 4-week period of July 7th to August 2nd.

The subject matter of the program is the broad principles of business and economics, designed to provide the prospective top-level utility executive with a view of his over-all responsibilities, particularly in the areas of accounting, finance, enterprise economics, human relations, business policy, and public utility regulation.

Educators making up the teaching staff are Professors Griffin, Hill, McCracken, Paton, Riegel, and Waterman of the School of Business Administration, as well as Professor Ben Lewis of Oberlin and Professor Erwin H. Schell of Massachusetts Institute of Technology.

A bulletin describing the program is being printed and will be distributed along with application forms, to the electric, gas, and telephone utility companies around February 1st.

Wants "Improved Practices" Written into Law

IN his message to the 1952 state legislature, Governor Williams on January 10th proposed that the "improved practices" now being followed by the state public service commission be written into law.

"The recent policies of the Michigan Public Service Commission have been a source of satisfaction to the people of Michigan," the governor said. "All interested parties are now given a full opportunity to be heard and the staff recommendations become a matter of record before final decisions are made. I recommend to you that these improved practices should be written into the law."

Governor Williams also told the lawmakers that a recodification of the state's utility and carrier laws might soon be placed before them. "Because regulatory

legislation has great public importance," he said, "I urge your careful analysis and scrutiny before you act on such a code."

New York

Workers Get Wage Raise

AN agreement giving 25,000 Consolidated Edison system employees in New York city and Westchester county a wage increase equivalent to more than 18 cents an hour, plus a 10 per cent increase in pension benefits, was announced recently by the company and the Utility Workers Union of America, CIO.

The agreement, subject to Wage Stabilization Board approval, includes an 11-cents-an-hour general wage increase, plus other on-the-job benefits worth an additional 7 cents an hour.

A spokesman for the company said that despite the delay by the state public service commission in the company's rate case, the company felt it must recognize "the inflationary pressures" to which the workers "have been subjected."

The contract and its terms will become effective March 1st and will run until March 1, 1953.

Asks Electric Rate Boost

THE Rochester Gas & Electric Corporation recently asked the state public service commission for an increase of 6.71 per cent, or $1,500,000, in electric rates.

The additional revenues are necessary to meet increased Federal taxes and higher operating costs, the company said, adding that it must be on a much firmer earnings basis before proceeding with new financing.

Rochester Gas & Eleectric this year will spend $18,000,000 on construction, the largest expansion budget in its history. The company petitioned for an 11.5 per cent rate boost last spring, but it was allowed only a 6 per cent hike on an interim basis.

Dewey Addresses Legislature

GOVERNOR Thomas E. Dewey told the opening session of the 175th session of the state legislature this month that New York will follow a policy of "restraint, decision, and choice" in dealing with new and increasingly costly demands for state services in the next year without increased taxes.

The governor placed heavy blame on what he called "Federal policies of inflation" for the state's inability to undertake "billions of dollars" worth of needed hospital and highway construction, or to meet other public demands with present revenues.

Concerning development of the Niagara and St. Lawrence rivers, he made the following statement:

> The legislature at its last session took action reaffirming and strengthening our state's great program for the development of cheap hydroelectric power from the Niagara and St. Lawrence rivers. In spite of the most strenuous efforts of your state power authority we are still being blocked by a stubborn group of Washington officials, some of whom seem determined that all hydroelectric power developments in the country must belong to the Federal government. This has cost the people not less than $50,000,000 in power bills. While the waters from these two great rivers run to waste, a most essential government defense plant manufacturing aluminum for the building of airplanes, which borders the St. Lawrence river, must import power from high-cost plants in Pennsylvania.

The governor's message also recommended compulsory semiannual inspection of motor vehicles, at state-owned stations, for a fee of 75 cents, effective July 1, 1953. Vehicles inspected and licensed by the state public service commission or Interstate Commerce Commission, farm vehicles, and those of certain local agencies would be exempt.

Urge Hearings for Gas Pipelines

Two Republican legislators recently proposed that the state public service commission be required to hold public hearings before allowing any natural gas pipelines or facilities to be constructed in any community in the state.

Senator Frank S. McCullough of Westchester and Assemblyman A. Gound Hatch of Rochester made public a resolution aimed at setting up broader safety precautions for the installation of natural gas.

The resolution states that there is "now no assurance that high-pressure natural gas pipelines together with their compressor stations and other facilities are being constructed, located, and operated in accordance with any uniform standards determined to be sufficient to protect the public safety, health, and welfare."

All of Westchester county was converted to natural gas last summer.

The McCullough-Hatch resolution directs the state public service commission to hold hearings at which the routes of new gas lines, their capacity, and the load they would carry would be studied. The commission would also be required to consider the type of site proposed for gas installations and set standards for proper locations.

The resolution would require the commission to adopt interim rules relative to natural gas facilities and report back to the legislature with recommendations for laws to protect the public safety.

The two legislators pointed out that there was now no Federal or state law regarding pipeline locations and that natural gas installations were currently planned for areas near homes, schools, and hospitals.

Oklahoma

Granted Rate Increase

Oklahoma Natural Gas Company recently was granted an annual rate increase of $3,224,662 by the state corporation commission.

The rate increase is based on the commission allowance of a 6 per cent return on investment and the commission staff figures it will mean an average increase in gas bills of about 13 per cent for the company.

The rate increase will be effective as soon as exact rate schedules are worked out for the 125 cities and towns, including Oklahoma City and Tulsa, served by Oklahoma Natural. Hearing was set for January 23rd on the rate schedules.

Oklahoma Natural asked for an annual increase of $6,906,000 and a rate of return of 7 per cent on its total investment, which the company set at a greater figure than the commission found. The application was filed last July. The commission rate is based on a net valuation of property of $86,710,000 as of December 31st, while the company claimed an investment figure of $94,021,413 as of August 31, 1952. The company included prospective investment; the commission did not.

Pennsylvania

Higher Phone Rates Set

Higher rates that would add about 50 cents to the monthly phone bill and eliminate the 5-cent pay station call were sought at Harrisburg recently by the Bell Telephone Company of Pennsylvania.

The new rates, designed to produce additional revenue of $32,355,600 a year, will go into effect March 7th unless the state public utility commission suspends them.

There was no official comment from the state commission. In filing the new tariffs, W. D. Gillen, president of the company, said: "Our need for adequate

financial relief is immediate and urgent."

According to Gillen, the cost of "virtually everything needed to run the business" has gone up. As a consequence, the company's current rate of earnings on its plant investment is "close to the lowest level of the depression years."

In the event the new tariffs are approved, the 15 per cent Federal tax would be added to the basic increases.

Rhode Island

Bill Seeks Study of Utility Law

A 5-MEMBER commission to see whether the law regulating public utilities and rate fixing should be changed was proposed in the state house of representatives early this month by Representative Lewis (Democrat, East Providence). The commission would be appointed by the governor.

Governor Roberts in his annual message on January 1st said his administration intended to add engineering and accountant technicians to the staff of the public utility administrator to strengthen state regulation of utilities.

When this was pointed out to Lewis, who said he had put in his bill for the CIO, he said: "They (the CIO) don't think the governor's plan goes far enough, I guess." Lewis is a member of the CIO.

A bill has also been introduced in the state senate which would vest in the state public utility administrator the right to fix water rates charged by the Kent County Water Authority.

Utah

Bus Order Announced

THE state public service commission early this month announced it was preparing an order to allow Ogden Transit Company to discontinue bus service on May 19th.

Commission Chairman Hal S. Bennett said the order was being announced at this time to give any prospective purchasers as much time as possible to investigate continued operation of the utility. He said permission was given the company to discontinue because it would be equivalent to confiscation of property to require continued transit operation.

Bennett pointed out that if the city of Ogden takes over the utility, as has been suggested by some residents, the commission will have no further jurisdiction over its operation.

Meanwhile, Mayor Frost of Ogden said that no plans had been made by the city to take over operation of a city bus system. He added that if it becomes necessary for the city to take over a transportation service, members of the Ogden city council are agreed that new busses should be purchased, if possible.

Virginia

Telephone Bills Introduced

BILLS have been introduced in the state legislature by Senator McCue, Charlottesville, which would (1) limit the net income of telephone utilities to 5 per cent of their investment; (2) provide that "net original cost" shall be the basis of determining the value of telephone property for rate-making purposes; (3) limit telephone utilities to paying no more than 3 per cent interest on any issuance of stock or other long-term indebtedness; (4) require a state corporation commission hearing for any community of more than eight persons requesting telephone service.

Progress of Regulation

Impact of Inflation Discussed in Telephone Rate Case

A STATEWIDE telephone company's application for authority to increase rates was denied by the Michigan commission. The company's argument that its postwar rate increases amounted to only 21 per cent while the over-all cost of living in the same period had increased 85 per cent was not considered proof of a compelling need for a rate increase.

The commission referred to the rule that rates must be just and reasonable to both consumer and investor and may not be measured by what the traffic will bear. The commission then pointed out that it would have to examine the company's revenues, expenses, and earnings in order to pass on the application.

Costs of "holding company" activities of the company's nation-wide parent organization were excluded from the subsidiary's expense account. None of the parent company's working capital was accepted as part of the operating company's rate base, but investments of the parent company which were used or useful in rendering service to the operating company were included.

The commission, in its examination of the company's relations with its affiliates, next considered equipment purchases. Payments made to a supplier for goods and services, the commission ruled, will be allowed as operating expenses but only after the supplier is treated as a public utility entitled to no greater return than the cost of money to the operating company. The reasonableness of these payments cannot be determined by comparison of the affiliate's prices with what other manufacturers charge, since the real question is the reasonableness of the affiliate's profits which have become a part of the operating company's expenses. In adjusting the company's expenses for equipment, the commission observed that the supplier's profits of from 10 to 12 per cent over a 4-year period were without question excessive.

The commission did not take cognizance of the change in the Federal income tax rate applicable to the company since Congress had acted after the record in the proceeding was closed.

The entire cost of service pensions for employees was allowed, including the so-called "freezing payment."

From certain exhibits and evidence offered by the company regarding the amount of money necessary to restore plant margins the commission inferred that the company was requesting that this amount should be recognized in the rate base. The ratepayer, the commission ruled, should not be obliged to pay a return on future expenditures to restore plant margins.

A claim by the company that an item referred to as the stockholders' contribution to the depreciation reserve should be included in the rate base was likewise rejected. The company's argument was that if it had charged depreciation at the rate approved by the commission in various orders, the reserve would be approximately $33,000,000 less than it actually is. This amount was described by the

company as a contribution by stockholders upon which they are now entitled to a return.

The commission rejected the claim in these words:

> If the stockholders did not receive a full return during this period, they certainly cannot at this late date endeavor to recapture, in effect, these lost dividends, at the expense of present or future ratepayers. . . .

The impact of inflation on the company's annual earnings requirement was discussed at some length. The commission pointed out that the company's earnings should not be automatically inflated because of the decline in the purchasing power of the dollar, since a ratepayer is entitled to the same protection against inflation as a stockholder. As a further reason for refusing any separate allowance for inflation the commission said that the impacts of inflation were specifically distributed throughout the utility's actual costs of doing business.

The fact that the cost of living had increased substantially was not considered a valid argument for a proportionate increase in rates without regard to increased usage, advancements in the art, technological improvements, operating economies, and other factors.

Finally, the commission assumed that the operating company's cost of capital was the same as that of its parent company. Based on capital structures of 45 per cent debt and 40 per cent debt, the company's cost of capital would be respectively 6.3 per cent and 6.5 per cent. The company's present rates were, according to the commission, producing net earnings lying within this zone and, consequently, were held to be just and reasonable. *Re Michigan Bell Teleph. Co. T-252-51.19, November 20, 1951.*

Provision for Telephone Service Denial upon Advice of Unlawful Use Canceled

THE complaint of two telephone subscribers against a telephone tariff providing for discontinuance of service upon advice from a law enforcement agency of its unlawful use was sustained for the most part by the Federal Communications Commission. In a proceeding brought by the same subscribers against the same regulation, the District of Columbia commission had upheld the regulation. (Katz *v.* Chesapeake & P. Teleph. Co. (1949) 80 PUR NS 76.)

The wording of the tariff follows:

> The service is furnished subject to the condition that it will not be used for an unlawful purpose. Service will not be furnished if any law enforcement agency, acting within its jurisdiction, advises that such service is being used or will be used in violation of law, or if the telephone company receives other evidence that such service is being or will be so used.

The commission approved the first sentence with the observation that a regulation which expresses the company's policy of refusing service for an unlawful purpose is not unjust or unreasonable. Nor did the commission feel that it would be unjustly or unreasonably discriminatory under the Communications Act for the company to discontinue a service used for illegal purposes.

The second sentence of the tariff was ordered canceled. The commission considered it an attempt by the company to insulate itself from liability if it mistakenly deprived a subscriber of service.

A further objection to the second sentence of the tariff was stated in these words:

> In effect, the carrier binds itself to accept in every case the advice of "any law enforcement agency, acting within its jurisdiction," without regard to the nature of the advice. Thus, it is possible that even though it may be within the knowledge of a carrier that the advice given it by a law enforcement agency is unfounded, the regulations

would require acceptance of the advice and action in response thereto. In such or comparable situations, the automatic action required by the regulations would be clearly unreasonable, and consequently the regulations themselves, demanding such action, must fall.

The commission conceded that an arduous task was imposed on the company (liability to the law enforcement agency if it refused to discontinue and to the subscriber if it discontinued), but ruled that the difficulty of the company's position was not sufficient justification for such a regulation.

Commissioners Coy and Sterling concurred with the result reached by the majority but also pointed out that the tariff was unjust and unreasonable because it provided for discontinuance without first giving the subscriber a hearing.

Commissioner Walker dissented and contended that the examiner's initial decision, which had held the tariff just, reasonable, and lawful, should be affirmed. *Katz v. American Teleph. & Teleg. Co. et al. Docket No. 9500, December 21, 1951.*

Municipality Required to Continue Water Service Beyond City Line

A PETITION by city residents for an investigation to determine whether a municipal water utility should continue to serve an industrial plant outside of city limits was dismissed by the Wisconsin commission.

The plant had been receiving water for over thirty years and had co-operated with the city in time of shortage and limited its use to water required for drinking, first aid, cafeteria, and laboratories. Water for industrial and toilet use was obtained from a private supply. No claim was made that the city lacked the capacity to serve the industrial plant.

The commission pointed out that the city owned the plant just as any other private owner would; that is, "in a proprietary and not in a governmental capacity." Consequently, it has the same obligation to its customers, wherever they are located, as a privately owned utility would. Since such a utility would be required to continue service to the plant in question, the commission ruled that the municipality had no less an obligation. *Schoen et al. v. Green Bay, 2-U-3626, November 19, 1951.*

Allowance Made for Water Conditions in Fixing Temporary Electric Rates

THE New Hampshire commission granted an electric company a temporary rate increase in the form of a 5 per cent surcharge on each bill rendered for prime power, except street lighting, and exclusive of fuel charge. It provided that this rate should continue in effect until permanent rates can be fixed.

Evidence indicated that when the company's operating results for the year are adjusted to reflect current or prospective Federal taxes, with average water power under present rates, an increase authorized earlier in the year will fall short of producing a 5.41 per cent return. The commission had expected this would enable the company to improve its capital structure by the issuance of common stock.

The commission considered the question of adjusting the operating results for the year to allow for the beneficial effect of the excellent water conditions prevailing. It said that the effect of water conditions on operating results must be completely and thoroughly explored in establishing permanent rates,

to the end that those rates will suffice to allow the company to earn a reasonable return under average or normal water conditions, and thus permit the company to accumulate earnings in times of good water to help out in times of bad water.

In this case the time element had been such as to prevent a thorough exploration of the amount by which the company's earnings had been affected by good water conditions. Consequently, the commission took an arbitrary figure as an adjustment for water.

Commissioner Thornton, in a dissenting opinion, disagreed with the computation of an allowance to the company for "average water." He did not believe the commission had any grounds for findings as to abnormal or average water in view of the inadequacy and inconclusiveness of the evidence on this point. Commissioner Thornton believed that the subject should be thoroughly explored in the permanent rate case now before the commission and that proper allowances should be made at that time. He said that, in fixing temporary rates, the commission should consider only actual results adjusted for factors known to be operative during the period the temporary rates are in effect. *Re Public Service Co. of New Hampshire, D-R3158, Order No. 6019, November 29, 1951.*

Hearing Unnecessary in Presidential Permit Proceedings

THE Federal Power Commission denied a motion for further hearing after consolidation of a proceeding relating to an application for a permit, under § 3 of the Natural Gas Act, authorizing the importation of natural gas from Canada into the United States and a proceeding relating to an application for a presidential permit authorizing the construction, operation, and connection of facilities at the international boundary for the importation of natural gas.

The parties supporting the motion for further hearing had been allowed to intervene in the § 3 proceeding. There had been no request for hearing by any of the parties in the presidential permit proceeding, and the two proceedings were substantially similar. The Natural Gas Act contains no requirement that a hearing be held in presidential permit proceedings. *Re Montana Power Co. Docket Nos. G-1712, G-1717, October 18, 1951.*

Railroad Not Required to Install Flashing Signal Lights At Its Own Expense

THAT part of a commission decision ordering a railroad to install and maintain flashing signal lights at certain crossings at its own expense was reversed by the Illinois Supreme Court. It was held that the commission was expressly empowered to apportion the cost of reconstruction, alteration, relocation, or improvement of crossings between the railroad company and other public utilities affected and the state, county, municipality, or other authority in interest.

The validity of a commission order, the court said, cannot be sustained unless the commission states its findings or conclusions, drawn from a consideration of the evidence, as to the existence of facts upon which the power exercised by the commission in entering the order is conditioned. In this instance, it was held, the commission finding that the community involved did not have surplus funds which could be used to defray any portion of the cost of installing flashing light signals was arbitrary and not supported by competent evidence, and such an order did not properly adjust and settle the question of benefits to the diverse interests of the railroad and other public authorities concerned. *Chicago, B. & Q. R. Co. v. Illinois Commerce Commission, 101 NE2d 92.*

Escrow Agent to Protect Creditors on Transfer Of Certificate

CONDITIONAL approval of the transfer of a motor carrier certificate was granted by the Colorado commission where the persons operating the transferor's business had incurred certain debts which the transferor disclaimed. The transferee, by agreement and as part of the purchase price, deposited money with an escrow agent to be turned over to the transferor if final judgment was not entered within one year. Such an arrangement, it was held, would protect the creditors and would necessitate but one lawsuit. For earlier decision denying transfer because arrangements had not been made to satisfy obligations to creditors, see 90 PUR NS 62.

The commission pointed out that as to whether or not the claims against the operations were proper charges was not a matter which the commission could determine, but was within the jurisdiction of the courts. *Re Cowan et al. (Cowan Coal & Feed Yard) Application No. 11164-Transfer, Decision No. 37806, November 29, 1951.*

CAB Refuses to Certificate "Low-fare Specialists"

THE Civil Aeronautics Board refused to award certificates for coach type service on transcontinental routes notwithstanding the desirability of developing the low-fare air transportation which was contemplated by the carriers applying for authorization.

The board ruled that it was not required to place additional carriers in the field, even though they might be considered "low-fare specialists," where existing carriers serving the same area had the necessary resources and facilities to insure the development of low-fare service. *Re Air America, Inc. Docket No. 3397 et al. November 7, 1951.*

Residential and Commercial Electric Customers Not Subject to Fuel Clause

PROPOSED electric rates that would yield a return of 6.13 per cent were approved by the New Mexico commission. However, a provision that all consumers be subject to a fuel adjustment clause was disapproved. The commission had no objection to the clause applying to industrial users, but refused to apply it to residential and commercial users of electric service.

Noting the fact that the proposed rates were reasonable both to the company and consumers and that the company served mountainous terrain in sparsely populated sections, the commission pointed out that the rate per kilowatt hour charged residential and commercial customers was disproportionately high compared to rates charged by other companies. The company, the commission said, should overlook no economies of operation. Every effort should be made to increase its load factor by leaving no steps untaken to increase the sale of energy so that service may be furnished at the least cost possible consistent with a fair return to the company. *Re Community Pub. Service Co. Case No. 348, December 18, 1951.*

Intermediate Decision by FPC Examiner in Rate Proceeding

THE Federal Power Commission issued a statement on its previous denial of a motion to waive the intermediate decision procedure in the case of Mississippi River Fuel Corporation. A rate increase had been filed, but this had been

suspended by the commission, and after expiration of the 5-month suspension period the increased rates became effective under bond as provided in § 4(e) of the Natural Gas Act.

The commission's statement resulted from the fact that Commissioner Buchanan had filed a statement concluding with the assertion that in his opinion the commission's action in refusing to omit the intermediate decision of an examiner was in "violation of the letter and spirit of the law." This characterization, said the commission, disregarded the facts of the particular case and was a distorted interpretation of the Natural Gas Act and the Administrative Procedure Act.

It was said to be significant that out of all the rate increase proceedings which had been before the commission, this was the first instance where a motion had been made by staff counsel or any of the parties to waive the intermediate decision procedure.

While this was not conclusive, said the commission, it did give an emphatic answer to insinuations that the commission had ignored the law in this instance.

The commission said that it had weighed the facts at issue and concluded that it was dealing with a proceeding where a decision by the examiner would be highly desirable. Therefore, it was unable to make the necessary finding under the Administrative Procedure Act that "due and timely execution of its functions" would "imperatively and unavoidably" require omission of a decision by the examiner who heard the case.

Commissioner Buchanan, in his dissenting statement, noted that the period of time allotted for filing of briefs, as fixed by the presiding examiner, allows sixty-three days between the conclusion of the hearing and the filing of final briefs. He said that, based on the commission's experience in gas rate increase cases, presiding examiners had on the average required five months to prepare their decision after final briefs had been filed.

This experience, he continued, also indicated that numerous exceptions would probably be filed; and in gas rate increase cases which had thus far reached the commission for decision, it had required on an average seven and one-half months for final decision after the initial decision was rendered by the examiner. Therefore, he said, based on previous experience, it appeared that the commission might expect a final decision in the case approximately fourteen and one-half months later.

In a supplemental statement, following the commission's statement, Commissioner Buchanan referred to what he called "infirmities inherent in the filing of a bond in rate increase proceedings." He said that by such method of protection, to his knowledge, all consumers were never reimbursed 100 per cent and it resulted in either "a feast or a famine to the distributing utility." *Re Mississippi River Fuel Corp. Docket No. G-1641, December 11, 1951.*

Other Important Rulings

THE Washington commission, in answer to an objection of the Office of Price Stabilization in a motor carrier rate proceeding, held that although it is aware of, and approves of, the interest of the Federal government in curtailing inflation, prescribed rates must be sufficient to insure the continued operation of this essential transportation service, since the carriers cannot control the cost of labor and materials. *Re Pacific Inland Tariff Bureau, Cause No. T-8636, December 27, 1951.*

The Federal Power Commission authorized an electric generating company to use an annual depreciation rate of 2.75 per cent in lieu of a previously authorized rate of 3 per cent in computing rates for the sale of electric energy at wholesale in interstate commerce. *Re Chicago Dist. Electric Generating Corp. Docket No. IT-5500, October 3, 1951.*

The Connecticut commission authorized a gas company to increase rates, pending the advent of natural gas, so as

to yield a return of 4.3 per cent. *Re Bridgeport Gas Light Co. Docket No. 8597, November 1, 1951.*

The Georgia commission, in passing upon a telephone company's application for authority to increase rates, rejected appraised value for rate-making purposes, saying that original cost less depreciation is the accepted basis. *Re Darien Teleph. Co. File No. 19334, Docket No. 239-U, October 26, 1951.*

The Wisconsin commission held that proposed electric rates that would yield a return of 6.3 per cent were fair and reasonable. *Re Winter Electric Light & P. Co. 2-U-3650, November 26, 1951.*

The Wisconsin commission held that proposed telephone rates that would yield a return of 6.25 per cent were fair and reasonable. *Re Waunakee Teleph. Co. 2-U-3624, November 6, 1951.*

The Pennsylvania commission directed a railroad to cancel a proposed tariff for petroleum shipments where this traffic would not bear its fair share of the railroad's transportation burden and where the proposed rate would not reflect properly the relatively high value of the traffic as weighed by its classification rating. *Coastal Tank Lines v. Reading Co. Complaint Docket Nos. 15137, 15143, November 8, 1951.*

The California commission held that the towing of floating cranes, dredgers, pile drivers, monitors, and barges loaded with lumber by towboats constitutes transportation of property and is within the commission's jurisdiction. *Re Coggeshall Launch Co. Decision No. 45876, Application No. 32224, June 26, 1951.*

The supreme court of Texas held that commission orders granting specialized motor carrier certificates and providing for the division and sale of such certificates, without setting out the full and complete findings of fact pointing out inadequacies of service furnished by existing carriers, were not subject to collateral attack, even though the orders themselves were sufficient proof of their own defectiveness, and that such orders could be set aside only through direct proceedings under statutes providing for the review of commission decisions by the district court. *Railroad Commission et al. v. Roberdeau et al. 242 SW2d 881.*

A Federal district court held that a railroad's tariff that provided for a refund where coal was transported to a port and then moved by ocean to another port and finally by rail, but provided for no refund if the final movement was by water carrier, rather than by rail, was unlawful in view of the statute prohibiting special rates and rebates. *McWilliams (James) Blue Line v. United States (1951) 100 F Supp 66.*

The Wisconsin commission, in approving a telephone rate increase, ruled that one phase of the company's present toll rate schedule was discriminatory in that a different rate was charged for service in one direction between two toll points than was charged for calls made in the opposite direction. *Re Prospect, G. & B. B. Teleph. Co. 2-U-3615, December 21, 1951.*

The supreme court of Vermont held that a petition made more than one year after the commission had granted and filed a motor carrier certificate, and which requested additional findings of fact upon which to predicate exceptions for an appeal, was not within the powers of the surviving members of the commission as constituted when the order was passed where the order was not excepted to and a request to stay the order was not made before it became final. *Nelson v. Chase, 83 A2d 505.*

The Maine commission excluded working capital from a water company's rate base where the company's tariff provided for payment of rates in advance. *Re Winterport Water Co. FC No. 1387, December 19, 1951.*

The Washington commission held that there should be an equality of interstate and intrastate railway freight rates and that discrimination can occur by a disparity of rates between interstate and intrastate commerce on any commodity where there is competition as to marketing. *Re Intrastate Rail Freight Rates and Charges, Cause No. T-8580, December 21, 1951.*

A Federal district court held that the fact that one of two applicants for a motor carrier certificate may wish to sell his share is not proof that there is no public necessity or need for the service. *St. Johnsbury Trucking Co. v. United States, 99 F Supp 977.*

The supreme court of Arizona dismissed an appeal from a judgment reviewing a commission order, on the ground that it had no jurisdiction since the appeal was not perfected within the statutory 30- or 60-day period from the date of entry of judgment. *Old Pueblo Transit Co. v. Corporation Commission, 236 P2d 1018.*

The United States Court of Appeals held that basic findings appropriate to support an order of the Interstate Commerce Commission, granting or denying reparation, are essential, but that the commission is not required to make formal findings of fact in separately numbered paragraphs, and it is enough if they appear in the form of a statement in the report and order of the commission. *Johnston Seed Co. v. United States, 191 F2d 228.*

The North Carolina commission held that although the fairest approach in determining original cost would be to take a 12-month period, ending at approximately the time of the last audit, and averaging the net investment (which is original cost plus expenditures for permanent improvements) over the twelve months under consideration, in dealing with a company engaged in an extensive expansion and improvement program, it would be more fair to average the period of increased expenditures. *Re Western Carolina Teleph. Co. Docket No. P-58, Sub 5, November 6, 1951.*

Titles and Index

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TITLES

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WISCONSIN PUBLIC SERVICE COMMISSION

Wisconsin Trailer Coach Association

v.

Wisconsin Power & Light Company

2-U-3390
December 3, 1951

COMPLAINT *against rates, rules, and practices of electric company as applied to trailer parks or camps; new rates, rules, and regulations approved.*

Service, § 169 — Restriction on resale — Electricity.

1. The Commission recognizes the dangers of unrestricted resale of electricity and favors rules restricting such resale; the principal reason for restricting resale is to eliminate the possibility of a middleman's profit and to insure to each user the protection afforded by Commission regulation, p. 67.

Service, § 328.1 — Electricity — Distribution at trailer park.

2. Electric service to trailer parks under a plan for apportionment of the cost to trailer tenants, with a continued restriction against submetering, was approved, subject to an option to tenants to take service directly from the utility, p. 67.

Rates, § 367 — Electric service to trailer park — Apportioned charge — Minimum bill.

3. Electric service to trailer parks was required to be made available under a rate schedule providing for an energy charge to be apportioned among trailer tenants, a minimum annual bill, and gross and net rates based on prompt payment of bills, p. 67.

Service, § 328.1 — Electricity — Trailer camps — Submetering — Individual connections — Rental fee — Apportioned bills.

Discussion of the problem of supplying electric service to trailer camps, involving (1) submetering, (2) service to each trailer individually, (3) service to the camp with a flat fee to tenants as part of rental, and (4) service to the owner with apportionment of service bills, p. 66.

Payment, § 53 — Discount for prompt payment — Trailer camps.

Rule relating to discount for prompt payment of bills for service to a trailer camp where charges are apportioned to trailer tenants, p. 70.

Service, § 328.1 — Distribution in trailer park — Meters.

Rule relating to electric meters and distribution facilities in trailer parks, p. 71.

By the COMMISSION: The Wisconsin Trailer Coach Association filed a complaint with the Commission on August 15, 1950, against the Wisconsin Power and Light Company, alleging in effect that the rates, rules, and practices of the utility as applied to trailer camps are unreasonable.

Notice of investigation and hearing was issued September 1, 1950.

Hearing was held September 27, 1950, in the State Office Building at Madison before examiner Calmer Browy.

APPEARANCES: Wisconsin Trailer Coach Association, by A. W. Sommer, Vice President, Sheboygan, and Arthur Jacob, Secretary-treasurer, Milwaukee; Wisconsin Power and Light Company, by Schubring, Ryan, Petersen & Sutherland, by William Ryan.

In Their Own Behalf: Jerry L. Dame, Madison; Ed. Sabel, representing Club 41 Trailer Park, Fond du Lac; Joseph Jaber, Fond du Lac.

Of the Commission staff: O. P. Deuel, rates and research department, and G. F. Wilke, rates and research department.

In general, complainants object to the rule against resale of current which is common but not uniform in the state. Objection is also raised against the delays, and inconveniences to trailer tenants that would result from direct utility service.

Large trailer camps are relatively new in Wisconsin. No uniform policy has been developed by the Commission or the utilities and accordingly the treatment of trailer camps varies materially. Some utilities allow submetering, and where this practice is followed there appear to be no serious problems. Trailer-Camp operators usually prefer this arrangement. In other areas, service is supplied by the utility directly to each trailer individually. Where this is done, the principal objection arises from the delays of connection and disconnection and deposit requirements. In other areas, service is furnished to the trailer camp as a commercial user and under the rules of the utility may not be submetered. Presumably this contemplates the collection for use of electricity by the trailer camp operator through a flat fee which is part of the rental. With the improvement in trailers and in appliance use in trailers, the flat fee for use of electricity became unsatisfactory and inadequate, and many trailer-camp operators began to install meters in self-defense but contrary to utility rules.

To a certain extent these practices were tolerated by local utility officials for a temporary period, because of the problems that would be raised by requiring strict adherence to rules. The situation has now developed to the point where the issues have to be met and some reasonable and equitable policy has to be established.

Schedule X–4.9 of respondent provides: "All energy sold by the company is to be used by the customer for the purposes designated or implied in the schedule applicable to his particular installation. *Energy so sold shall not be resold* or redistributed to others, except where the company contracts for the wholesale of energy to municipalities or other utilities."

Schedule X–4.3 provides:

"Extra meters are not supplied for submetering contrary to the rule per-

taining to the determination of the proper rate schedule and prohibiting the resale of energy."

Schedule X–4.4 contains the following:

"The utility's retail rates are designed for application to individual consumers or units of service, such as dwelling units, farms, stores, business enterprises, factories, etc., and *to the extent practical* each such unit shall be separately metered and billed. *Where it is impracticable to supply separate circuits* and metering for each such unit, the utility will, while such condition exists, supply service to the combination under the following conditions.

"The combination service supplied *shall not be remetered or resold,* but the *owner or tenant may apportion service bills among the users of the service,* or may supply such service without specific charge as an incident of tenancy."

If the above-quoted rules are scrutinized carefully, it will be found that they:

(1) Recognize a practical limitation to the rule requiring individual unit metering and billing.

(2) Distinguish between "remetering" and "reselling" which is not allowed and an arrangement whereby the owner "may apportion service bills among the users of the service."

The principal objections to individual metering and service by the utility are the inconveniences to the customer. Customers come and go at all hours of the night and all days of the week, especially on week ends. Normal "new customer" dealings with the utility would obviously prove unsatisfactory with connection delays, deposits, and similar provisions.

Submetering, it is argued, would avoid all the delays and inconveniences that are inherent in individual utility metering and service. It would also automatically take care of the wide variation in customer use of electricity, the principal reason for complainant's objection to the "flat rate included in the rent" proposal. Many trailers are elaborately equipped with refrigeration, electric heat, electric blanket, water heaters, roasters, lights, clocks, radios, and many other appliances. In some parks the pipes leading to the trailer from the water pipe below the front line is electrically heated to prevent the water from freezing between the frost line and the trailer. Other trailers' use of current would be relatively small.

This Commission on occasion has authorized or allowed submetering and in Docket 2–U–3103 (Re Wisconsin Electric Power Co. [1950] 84 PUR NS 1), again approved the practice in connection with trailer camps. However, submetering had an early start in these areas and had been adopted in connection with other classes of customers. In 2–U–3103, *supra,* the Commission merely set forth the conditions under which submetering would be permitted in trailer camps located in these particular areas.

[1–3] Most of the utilities operating in Wisconsin have filed rules prohibiting the resale of electricity (excepting sale to other utilities and cooperatives) and these rules have been accepted and approved by the Commission. It may be said that, in general, the Commission recognizes the dangers of unrestricted resale of electricity

and favors rules restricting such resale.

There are, however, borderline cases which require a rational and practical approach. This is indicated by the rules quoted above which provide that under certain conditions "combination service supplied shall not be remetered or resold, but the owner or *tenant may apportion service bills among the users of the service.*"

The principal reason for restricting resale is to eliminate the possibility of a middleman's profit and to insure to each user the protection afforded by Commission regulation. Where a bill is apportioned (properly), there is no chance for a middleman profit. Where a trailer camp tenant has the option of taking service direct from the utility he accordingly has the opportunity of enjoying the same protection under Commission regulation that is afforded all customers of a utility.

Before ruling on this question, which, although relatively new in Wisconsin, has a longer history in other parts of the country, an effort was made to determine how the problem had been met in other states. Out of 35 answers from state Commissions, 10 were eliminated as either lacking jurisdiction or having no trailer camps. Of the remaining 25, there were 13 states prohibiting submetering and 12 states allowing submetering. All but one of the latter exercise some control over submeter rates. All of the Commissions reported that no uniform policy had been adopted.

On April 3, 1951, an examiner's report was issued by direction of the Commission. The recommended findings were to the effect that present rules were inadequate and unreasonable and that reasonable rules should be filed. The utility, it was recommended, should file acceptable rules within sixty days or "the defendant shall amend its rules so that trailer parks will be allowed to submeter . . . ."

On April 11th, the defendant filed exceptions to the proposed findings and decision in the examiner's report. On April 14th defendant filed a brief in support of exceptions indicated above and therein suggested a 60-day adjournment from April 16, 1951, to afford an opportunity to the interested parties to give further study to the matter. Attorneys for the complainant concurred in the suggestion for a 60-day adjournment.

Under date of June 11, 1951, the Wisconsin Power and Light Company submitted its proposal. The plan involved the establishment of meter locations, chosen by the operator (and supports furnished by him with the distribution system either utility owned or customer owned, as mutually agreed). Service at each meter location would be in the name of the camp owner. Service would be furnished by the utility at each meter location under a flat charge of 4 cents a kilowatt hour with an annual minimum charge of $10 for each meter location. Meters would be read monthly and service billed to the camp owner.

While taking service under this schedule, the park operator: (1) "may divide the charge he pays the utility for such service among the various tenants occupying the trailer lot from time to time by taking readings of the meter, rendering bills at the charge of 4 cents a kilowatt hour on the special forms supplied by the utility (but not

otherwise) and collecting same from the successive tenants; or (2) may supply electric service to any tenant as an incident of tenancy without specific charge therefor. Park operator is responsible for paying for the entire registration on the meter, which will be read and billed by the utility to the park operator at the usual periods. Park operator retains copies of all prorated bills to tenants, and of meter readings taken, for a period of not less than two years, which records shall be available for inspection by the utility and by the Public Service Commission.

"When first arranging for electric service for any tenant, the park operator shall notify the tenant that the tenant may obtain service direct from the utility at the applicable standard residential rate by making application to the utility, instead of paying prorated bills to the park operator under this schedule. A $2 'short-term use' charge is made to the tenant at the time of transfer of the meter to the tenant's name, and when the tenant terminates his connection the meter is again placed in the name of the park operator, without further transfer charge."

On July 25, 1951, by previous arrangement, representatives of the interested parties in this case met in the Commission offices to discuss informally the above-suggested program for dealing with trailer camps. As a result of this conference, some of the objections to the company's proposal were disposed of satisfactorily, but the following objections were not met:

(1) A number of trailer camp operators have invested substantial amounts in meters and distribution-line equipment which would, in some instances at least, not be used whereas under submetering such equipment would be used.

(2) There is pressure of competition from trailer camps in territory where submetering is permitted.

(3) The complainants feel that the utility should pay their part of the cost of changeover if the company-proposed plan were adopted.

The plan proposed by the company has considerable merit. It provides for the camp operator a means of assessing each trailer on the basis of current used, which was one of the main reasons for adopting submetering. It also meets the problem of giving the tenant an immediate connection. It provides meters that must meet Commission standards of accuracy. It provides for direct utility service to the customer at his option. It provides distribution-system wiring on the trailer-camp site that meets code requirements, and added safety, at no additional cost to the camp owner.

It protects the trailer-camp-tenant portion of the general public against excessive nonregulated rates, by means of a simple, easily allocated, flat rate for each kilowatt hour plus the added protection of being served direct by the utility upon request.

Against these benefits are the objections of camp owners as already listed. The objection is raised that meter and distribution-system equipment in some instances would not be used. True, the meter would not be used—others would be provided by the utility at no cost to the camp owner and would be maintained and replaced at no cost to the camp owner (if he apportioned energy used to his tenants).

Distribution-system equipment would be used unless it did not meet code requirements and hence was not safe.

The objection raised of pressure of competition from trailer camps where submetering is allowed would no longer remain since all of the important benefits of submetering remain under the proposed plan. Of course, submetering offers the opportunity to camp owners—and the danger to camp tenants—of exorbitant rates, but the complainants in this case stressed the fact that it was not their intent to sell energy at a profit.

The remaining objection that the utility should pay the camp-owner's part of the cost of the changeover seems to be met by the provision in the plan that "the distribution system in the park may be either utility owned or customer owned, as mutually agreed."

While the proposed plan seems to offer a reasonably satisfactory arrangement for dealing with trailer camps, there are some minor faults that should be corrected. The extent to which policing of allocated cost of energy is contemplated under the plan is excessive and unnecessary. If the tenant is aware of the flat rate applicable to his service and is also aware that he can be served directly by the utility, there is little danger of the existence of exorbitant charges for electric service. Other changes will be reflected in the rate authorized.

The Commission finds:

(1) That the present rates and rules of Wisconsin Power and Light Company applicable to trailer camps are inadequate and unreasonable.

(2) That the rates and rules hereinafter ordered are reasonable.

The Commission concludes:

That an appropriate order should be issued in accordance with the foregoing findings of fact.

Order

It is therefore *ordered:*

1. That Wisconsin Power and Light Company be and hereby is authorized and directed to place in effect the optional special rate applicable to service furnished to trailer parks as set forth in the appendix which is hereby made a part of this order.

2. That the existing commercial lighting rates of Wisconsin Power and Light Company remain available to trailer parks, together with the restriction against submetering that is in the present rules.

APPENDIX

Service to Trailer Parks

Effective in: All territory served.

Availability: This schedule is available to the owner or operator of any trailer park for electric service through individual meters supplied by the utility.

Rate: Energy charge of 4 cents net per kilowatt hour.

Minimum annual bill to trailer park: $10 a year per meter, for years ended on the regular December meter reading date. Any revenue received by the utility for service supplied at the standard residential rate to the trailer tenant through such meter shall count toward the annual minimum bill.

Prompt payment of bills; Customers' monthly bills will be computed at the above rate, and the gross amount of the bill shall be determined by adding to the net bill ½-cent per kilowatt hour used during the month,

but in no case shall such addition be more than 10 per cent of the net bill, except that it shall be not less than 15 cents.

This sum will be deducted from the gross bill when prompt payment is made in accordance with the company's standard rules.

Conditions

Park operator may contract for service for any meter location for a period of three years, under the regular extension rule, or without definite period under the terms of schedule RgT-1. Park operator furnishes support and space to accommodate utility-furnished metering equipment at each trailer lot, and support to receive utility's service wires. The distribution system in the park will be furnished by the utility unless the owner of the park prefers to supply all or part of the facilities on his premises.

While taking service under this schedule, the park operator: (1) may divide the charge he pays the utility for such service among the various tenants occupying the trailer lot from time to time, by taking readings of the meter, rendering bills at the charge of 4 cents per kilowatt hour and collecting same from the successive tenants; or (2) may supply electric service to any tenant as an incident of tenancy without specific charge therefor. Park operator is responsible for paying for the entire registration on the meter, which will be read and billed by the utilty to the park operator at the usual periods. If it is determined that the owner or operator is not complying with the above conditions, he may be required at the option of the utility to:

(1) Take service on the commercial service rate with submetering prohibited, or

(2) Arrange for individual utility service to each trailer, or

(3) Continue on this rate, using special forms provided by the utility in billing each tenant, and retaining copies of all prorated bills to tenants, and of meter readings taken for a period of not less than two years, which records shall be available for inspection by the utility.

When first arranging for electric service for any tenant, the park operator shall notify the tenant that the tenant may obtain service at any time direct from the utility at the applicable standard residential rate by making application to the utility, instead of paying prorated bills to the park operator under this schedule. A $2 "short-term use" charge is made to the tenant at the time of transfer of the meter to the tenant's name; and when the tenant terminates his connection, the meter is again placed in the name of the park operator, without further transfer charge.

Re Farmers Mutual Telephone Company

Cause No. U-8481
November 30, 1951

APPLICATION *by telephone company for authority to borrow from the Rural Electrification Administration of the United States of America and for approval of the execution of a note and mortgage; granted subject to conditions.*

Security issues, § 120 — Note for Federal loan — Restriction to amounts advanced.

1. A mortgage note issued by a telephone company to the United States of America pursuant to the Rural Electrification Act of 1936 should not definitely obligate the company to repay, with interest, the maximum amount which may be borrowed under a telephone loan contract but should provide for repayment, with interest, of the principal amount actually advanced and charged against the note, p. 75.

Mortgages, § 5 — REA loan from government — Terms — Mortgage notes.

2. An open-end first mortgage covering all the property of a telephone company to secure repayment to the United States of America advancements on notes pursuant to the Rural Electrification Act of 1936, permitting the issuance of notes in the aggregate principle amount of $4,000,000 and indicating that the first note will be in the principal amount of $1,087,000 (the maximum amount authorized by the company's board of directors), but providing for the issuance of additional notes when duly authorized by the board of directors, should be so worded as to show the intent that the reference to additional notes applies to notes other than the first one in the principal amount of $1,087,000 if the first note is for a lesser principal amount, p. 76.

Rates, § 49 — Restriction on Commission authority — Approval of REA mortgage or loan contract.

3. The Commission, in approving a proposed note and mortgage to be issued by a telephone company to the United States of America pursuant to the Rural Electrification Act of 1936, cannot, and will not, bind itself to determine the reasonableness of the borrower's rates, charges, and tolls in accordance with any specific formula or procedure set forth in the proposed mortgage or loan contract; and regardless of provisions giving the REA Administrator control over the company with respect to operations, the Commission will not bind itself to enter any order in the future approving rate schedules satisfactory to the REA Administrator, p. 76.

Service, § 209 — Extension policy — Telephone company.

4. A telephone company's line extension policy is reasonable when it provides that the company will build, at its own expense, all extensions to plant necessary to serve subscribers within the base area; that the company will build extensions or additions necessary to serve subscribers within the suburban area on the condition that the cost of such construction, in excess

of three and one-half years estimated exchange revenue, shall be paid by the prospective subscriber in advance of construction; that no extension will be considered as coming under the rule if the ratio of the total cost of extension to estimated annual exchange revenue is greater than 6 to 1; and that extension costs more than the specified 6 to 1 ratio may be constructed, but only under the terms of a special contract between the subscriber and the company, p. 78.

Mortgages, § 5 — REA loan from Federal government — Service extension policy.

5. A telephone company, with an approved service extension policy, borrowing funds from the United States of America pursuant to the Rural Electrification Act of 1936, under a loan contract providing for a mortgage and notes, when the contract contains provisions relating to extensions, has no alternative but to use only as much of the loan proceeds for the construction of future line extensions as may be necessary and proper under the provisions of that policy, p. 78.

Security issues, § 99 — Debt ratio — REA loan from government.

6. A 78 per cent debt ratio, although far in excess of the maximum percentage normally considered to be proper for a soundly financed telephone company, is not a bar to approval of a proposed note and mortgage to be issued by a telephone company to the United States of America pursuant to the Rural Electrification Act of 1936 when, because of the low interest rate on the loan, the company can retire the loan and pay interest on the diminishing balance for less than the interest payments would be on the same amount if borrowed from certain private lending agencies, with the consequence that the financial burden of servicing the high debt ratio is no greater than the comparable burden of servicing a lower debt maturing in a shorter period with a higher rate of interest, p. 80.

By the COMMISSION: On October 9, 1951, the Farmers Mutual Telephone Company (Farmers) filed an application with the Commission under Chap 151, Laws of 1933, as amended, for an order authorizing it to issue a note, secured by a first mortgage on its properties, in the principal amount of $1,087,000. On November 14, 1951, applicant filed certain exhibits to be substituted for those submitted with the original application.

The proposed note and mortgage is to be issued to the United States of America (Government) under and pursuant to the Rural Electrification Act of 1936, as amended, acting through the Administrator of the Rural Electrification Administration (REA). Submitted with, and made a part of the application, is a telephone loan contract (hereinafter referred to as the Contract) dated August 1, 1951, between Farmers and the Government setting forth the terms and conditions under which the Government shall lend and Farmers shall borrow an amount not in excess of $1,087,000 for the following purposes: [See table on page 74.]

Article I, § 1.1, of the contract authorizes Farmers to borrow from the Government the amount necessary to pay accrued interest on its outstanding indebtedness in addition to the $300,000 required to discharge the principal thereof. However, the application herein does not specifically list the payment of said accrued in-

Purpose				Amount
1. To refinance following notes payable to Penn Mutual Life Insurance Co.				
Cause No.	Date of Issue	Maturity Date	Int. Rate Per Annum	
U–8254	7– 1–49	7– 1–69	4 %	$200,000
U–8468	8–28–50	12–26–51*	4½%	100,000
2. To construct, complete, extend, or improve facilities				727,506
3. To reimburse treasury				59,494
Total				$1,087,000

* Originally payable February 28, 1951; but refunded with new note payable August 28, 1951, the maturity of which was extended first to October 27, 1951, and later to December 26, 1951, pursuant to orders of the Commission dated August 29, 1951, and October 19, 1951, in Cause No. U–8460.

terest as one of the proposed items of expenditure. Consequently, the amount required for this purpose must be paid from the amount requested for treasury reimbursement unless applicant chooses to use other corporate funds not obtained from the proposed REA loan.

After applicant has reimbursed its treasury in the amount of $59,494 for moneys previously expended from income or other moneys not secured by or obtained from the issuance of securities, as authorized by § 10439–3, Rem Rev Stat, said sum will be used approximately as follows:

Purpose	Amount
1. Attorney fees	$2,500
2. Securities fee payable to Commission	847*
3. Preliminary survey and mapping	240
4. Employees' salaries and expenses	1,250
5. Working capital	26,000
6. Materials and supplies	10,000
7. Miscellaneous general overhead for capital additions, if needed	18,657
	$59,494

* Actual fee will be $827.49

Submitted with and made a part of the application herein is a conformed copy of each of the following documents setting forth the terms and conditions of the proposed REA loan under consideration in this proceeding:

1. Proposed mortgage note
2. Proposed mortgage
3. Telephone loan contract dated August 1, 1951, between Farmers and the Government

The Proposed Note

The proposed mortgage note provides that Farmers will pay to the Government the sum of $1,087,000, with interest thereon at the rate of 2 per cent per annum, and that interest accruing on the principal thereof shall be allowed to accumulate and remain unpaid for two years after the date thereof. The interest thus accumulated is to be paid at the rate of $7.58 per $1,000 on the first day of January, April, July, and October in each year until fully discharged. On these same payment dates, also beginning two years after the date of the note, applicant will be required to pay, in addition, $10.37 per $1,000 on the principal amount unpaid, such payments being applied first to current interest on the principal and the balance to the principal. The latter payments are to be continued to and including a date thirty-five years after the date of the note, at which time all the accumulated interest and unpaid principal, if any, will become due and payable. However, applicant may, on

any of the specified payment dates, pay without penalty, all or any part of the accumulated interest or the principal remaining unpaid. The proposed note also states that it has been executed and delivered pursuant to, and is secured by, a certain mortgage made by Farmers to the Government and is one of several notes limited to the aggregate principal amount of $4,000,000 permitted pursuant to the said mortgage, which mortgage provides that all notes shall be equally and ratably secured thereby. In case of default, as set forth in the mortgage, the note provides that all accrued interest and unpaid principal on the note or notes outstanding may be declared, or may become due and payable.

It appears from the foregoing that applicant proposes to issue but one note in the principal amount of $1,087,000 which is referred to in the proposed mortgage as the first note. This is the maximum amount Farmers' board of directors has authorized the corporation to borrow subject to the Commission's approval in this proceeding, although additional notes could be issued under the mortgage so long as all the notes secured thereby, at any one time, do not exceed $4,000,000 in aggregate principal amount. Moreover, none of said notes may mature more than fifty years after the date of the mortgage, which date will be the same as the date of the first note issued thereunder.

[1] The proposed telephone loan contract clearly indicates that the REA will not advance to Farmers the entire sum of $1,087,000 at the time the proposed note in that principal amount is executed and delivered. The contract provides that interest shall accrue on the principal of each note only with respect to amounts which shall have been advanced to Farmers from time to time on account of the loan and charged against such note. However, the proposed note itself contains no such provision, or any specific reference to the Contract, but instead definitely obligates Farmers to repay $1,087,000, together with interest, on or before thirty-five years from the date of the note evidencing the obligation. Actually, the first proposed advance of funds on account of the loan would be made to refund Farmers' outstanding indebtedness in an aggregate amount not in excess of $300,000, plus accrued interest. (See Article II, § 2.1, (C) of Contract.) Thereafter, the Government will be under no obligation to make any further advances except pursuant to separate requisitions and accompanying documents satisfactory to the REA Administrator, which advances are to be charged by the Government against any one or more of the notes, ". . . in such manner and in such amounts as the Administrator shall determine." (Article II, §§ 2.2 and 2.3 of Contract.)

In the absence of any specific provision in the proposed note itself clearly indicating that Farmers will be obligated to pay interest and principal only with respect to funds actually advanced to it from time to time, Farmers might possibly find itself legally liable to make principal and interest payments on an amount in excess of funds actually borrowed. To remove that possibility, this order should, therefore, provide that the note or notes Farmers is authorized to issue and deliver shall be repayable on or

before thirty-five years from the date thereof, together with accrued interest on the principal amount actually advanced and charged against such note or notes, regardless of the indicated principal amount thereof. Article I, §§ 1.1 and 1.2 of the Contract clearly indicate that this is the intent of the parties to the agreement even though no specific reference thereto is to be found in the proposed mortgage note.

The Proposed Mortgage

[2] The proposed mortgage between Farmers and the Government is to be dated as of the date of the first note issued pursuant thereto. It is an open-end first mortgage covering all right, title, and interest of Farmers in and to all of its property now owned by it or which may thereafter be owned or acquired, including without limitation all property specifically listed or described in the mortgage. Article V, § 1, is a declaration by the mortgagor of intention that all of the mortgaged property, including lines, poles, easements, etc., ". . . shall be deemed to be real property." While notes in the aggregate principal amount of $4,000,000 may be issued pursuant to the proposed mortgage and any supplemental mortgages that may be executed, none of said notes will be allowed to mature more than fifty years after the date of the mortgage. However, the mortgage indicates that the first note will be in the principal amount of $1,087,000 which, as previously stated, is the maximum amount Farmers' board of directors has authorized the corporation to borrow from the Government as of this time. Although the proposed mortgage provides for the issuance of additional notes, when duly authorized by resolutions of Farmers' board of directors (Article I, § 1), the additional notes referred to are clearly intended to apply to notes other than the first one in the principal amount of $1,087,000. Should the first note be for a lesser principal amount, the present wording of the proposed mortgage should be altered accordingly.

[3] Section 16 of the proposed mortgage reads, in part, as follows:

"The mortgagor, subject to applicable laws, rules, regulations, and orders of regulatory bodies, will charge for telephone service furnished by its rates which shall be at least sufficient to pay and discharge all taxes and expenses of whatever kind and character, and also to make all payments in respect of principal of and interest on notes when and as the same shall become due and to provide and maintain working capital which shall in no event be less than 1.5 times the average monthly amount of the mortgagor's cash expenditures for operating purposes during the preceding twelve months, or shall in no event be less than the amount borrowed by the mortgagor from the mortgagee for operating purposes, whichever is greater. . . ."

Section 202 of Title II of the Rural Electrification Act of 1936, as amended, reads as follows:

"Nothing contained in this act shall be construed to deprive any state Commission, board, or other agency of jurisdiction, under any state law, now or hereafter effective, to regulate telephone service which is not subject to regulation by the Federal Communications Commission, under the

Communications Act of 1934, including the rates for such service."

In view of the above-quoted provision of the REA Act, it would appear unreasonable to assume that § 16 of the proposed mortgage can properly be interpreted as depriving this Commission of any of the discretionary powers delegated to it by the laws of Washington with respect to determining the reasonableness of applicant's telephone rates. In approving issuance of the securities under consideration in this proceeding, the Commission therefore wishes to make it clear to all parties concerned that such approval shall, in no way, be construed as impairing the power and duty of the Commission to determine the reasonableness of applicant's present or future rates, charges, and tolls in accordance with applicable state laws, or any rules, regulations, or orders promulgated thereunder. The Commission, therefore, cannot, and will not, bind itself to determine the reasonableness of applicant's rates, charges, and tolls, in accordance with any specific formula or procedure set forth in the proposed mortgage or loan contract.

The Proposed Loan Contract

The proposed loan contract is replete with provisions that give the REA Administrator virtually complete control over Farmers with respect to numerous matters associated with security for the proposed loan, construction of the facilities, the requisitioning, advancement, and handling of funds for such construction, and operations during and after construction. Applicant, in the exercise of its own independent managerial discretion, has indicated its willingness to accept these restrictive provisions. The Commission does not propose to substitute its judgment for that of the applicant with respect to any matter that properly falls within the province of management. However, the Contract contains two important provisions, in addition to those previously discussed, which appear to require special mention because they might be construed as impairing the Commission's powers and duties with respect to applicant's rates, services, and facilities.

Article II, § 2.1(B), of the Contract provides, in part, as follows:

"No funds shall be advanced on account of the loan unless and until the borrower shall have submitted evidence satisfactory to the Administrator that:

"(a) The borrower has obtained all necessary approvals and orders from all regulatory bodies having jurisdiction in the premises, including, without limitation, the following: . . . (2) an order or orders from the Washington Commission approving rate schedules satisfactory to the Administrator . . . ."

The last major order involving the rates of Farmers was entered by the Commission on December 30, 1950, in Cause No. U–8380. The rates authorized by that order were designed to produce a 5.17 per cent rate of return on a total rate base of $449,098.06 after considering all the elements deemed pertinent to the determination, including a proposed 10 per cent overall wage increase. At such time as conditions change so as to warrant a revision of the rates now charged by Farmers, the Commission will, of course, consider the matter in a proper proceeding wherein all the factors rele-

vant thereto will again be reviewed. However, the Commission will not bind itself in this proceeding to enter any order in the future approving rate schedules satisfactory to the REA Administrator. This order should not, therefore, be construed as an acquiescence by the Commission in any provision of the proposed loan contract or mortgage which might be interpreted as impairing, to any degree whatsoever, the Commission's statutory powers and administrative discretion in the matter of determining the reasonableness of applicant's present or future telephone rates, charges, and tolls.

[4, 5] Article IV, § 4.6 of the Contract entitled, "Area Coverage," provides, in part, as follows:

"The borrower shall furnish adequate telephone service to the widest practicable number of persons in rural areas, and, subject to applicable laws, rules, regulations, and orders of regulatory bodies, shall, in the performance of such obligations, use the funds in the Special Construction Account . . . and such other funds as may from time to time be available to it . . . to extend service . . . to all persons . . . in rural areas in the borrower's telephone service area . . . who shall (a) desire such service and (b) shall meet all reasonable requirements established by the borrower as a condition of service. The extension of service to all applicants in the telephone service area of the borrower is of the essence of the borrower's obligations under this agreement, and the failure or neglect of borrower to perform such obligation shall be deemed to be an event of default hereunder and under the mortgage and any supplemental mortgage."

On November 5, 1951, Farmers filed with the Commission, to become effective December 5, 1951, Schedule 47 of its tariff entitled, "Line Extension Policy." This filing provides that the company will build, at its own expense, all extensions to plant necessary to serve subscribers within the base rate area. It provides further that the company will build any extensions or additions to plant necessary to serve subscribers within the suburban area on the condition that the cost of such construction, in excess of three and one half years estimated exchange revenue, shall be paid by the prospective subscriber in advance of construction. No extension will be considered as coming under this rule if the ratio of the total cost of the extension to the estimated annual exchange revenue is greater than six to one. Extensions costing more than the specified six to one ratio may be constructed, however, but only under the terms of a special contract between the subscriber and the company.

The foregoing line extension policy is clearly a reasonable requirement as a condition of service to be met by all who desire telephone service from Farmers in cases which involve the construction of line extensions. It is reasonable because many other telephone companies in this state have adopted a similar line extension policy and it has proved to be very satisfactory in actual practice over a period of years. Furthermore, it will protect Farmers against the possibility of being required to use any more of the loan proceeds than is economically justi-

fied for the construction of line extensions.

Finally, the new line extension policy gives genuine substance, specific meaning, and proper qualification, to the "Area Coverage" provision of the Contract in so far as it requires applicant to "furnish adequate telephone service to the *widest practicable number* of persons in rural areas" and to extend service *"to all applicants* in the telephone service area of the borrower." (Italics supplied.)

Since the applicant herein has adopted the above-outlined line extension policy as a part of its filed tariff, it has no alternative but to use only as much of the loan proceeds for the construction of future line extensions as may be necessary and proper under the provisions of said policy.

Ability of Farmers to Service Loan

It appears from the information submitted that applicant's net operating income for the first six months of 1951 was $17,409.05, or $34,818.10 on a pro forma annual basis. The average annual amount required to meet interest and principal payments on the proposed loan, after the first two years, will be approximately $44,000, or 4.05 per cent of the principal amount of the loan. When applicant first begins to pay the interest allowed to accumulate on the amount advanced during the first two years, in addition to making current interest and principal payments, the annual amount will, of course, be more than the average indicated. On the basis of applicant's net operating income for the six months ended June 30, 1951, it is, therefore, obvious that earnings will be insufficient to service the loan. However, said earnings do not accurately reflect changes which will be brought about as a result of the construction program to be financed by the proposed $1,087,000 loan.

The application states that Farmers now furnishes telephone service to approximately 6,347 customers. Exhibit "J" of the application states that the proposed construction will convert Blaine, Deming, Laurel, and Lynden from common battery and magneto service to dial type service; thus providing dial type service to the 5,816 existing subscribers. In addition, applicant's construction program includes plans to build 106.3 miles of pole line and cable, and to install dial type telephones and associated station equipment to serve an additional 1,208 subscribers.

The above-outlined construction work, when completed, will undoubtedly result in a substantial reduction in expenditures for operators' wages which amounted to $44,806.55 during the first six months of 1951. It is also entirely possible that applicant will be able to reduce its current maintenance expense. These savings, though offset to some extent by an increase in depreciation expense, etc., will, of course, be reflected in a substantial increase in net operating income. Whether or not such increase will result in an excessive rate of return that may necessitate a downward revision of applicant's rates cannot be determined at this time, but the possibility of such a revision should not be overlooked in the event future circumstances warrant such action in a proper rate proceeding.

The Commission, by its order dated December 11, 1950, in Cause No. U–8380, authorized Farmers to establish

rates calculated to produce a rate of return of 5.17 per cent which was found not to be excessive. A comparable rate of return on a higher rate base, if authorized in any future rate proceeding, would, therefore, appear adequate to produce net operating revenues more than sufficient to meet all interest and principal payments on the proposed loan. In view of the foregoing, it appears that Farmers will be able to service the loan from net operating income.

Capital Structure

The figures that follow compare applicant's capitalization as of June 30, 1950, with the capitalization as it will be, on a pro forma basis, after giving effect to the financial transactions under consideration in this proceeding:

	As of 6-30-51		Pro Forma	
	Amount	%	Amount	%
Debt:				
Notes Payable	$300,000	49.5	$1,087,000	78.0
Equity:				
Common Stock	17,745	2.9	17,745	1.3
Surplus	288,367	47.6	288,367	20.7
Total Equity	$606,112	100.0	$1,393,112	100.0

[6] A 78 per cent debt ratio is far in excess of the maximum percentage normally considered to be proper for a soundly financed telephone company. However, the Government has made it possible for applicant to borrow, on 35-year notes, the sum represented by this high ratio at a rate of interest even lower than large companies, such as The Pacific Telephone and Telegraph Company, can borrow money from banks on short-term notes. In fact, Farmers can retire the loan and pay interest on the diminishing balance for less than the interest payments would be on the same amount if borrowed from certain private lending agencies. For these reasons, the financial burden of servicing the high debt ratio in this case is no greater than comparable burden of servicing a lower debt, maturing in less than thirty-five years, with a higher rate of interest. Consequently, the high pro forma debt ratio of applicant in this case is not as significant a factor as it might be under different circumstances. Furthermore, as the loan is repaid, the outstanding debt will gradually be reduced and the equity in the form of surplus will be increased thereby improving applicant's capital structure.

Findings

The Commission finds:

1. The Farmers Mutual Telephone Company is a Washington corporation operating telephone lines used in conducting the business of furnishing telephonic communication for hire within the state of Washington and, as such, is a telephone company and a public service company subject to the regulatory jurisdiction of this Commission.

2. The application submitted herein meets the requirements of Chap 151, Laws of 1933, as amended, and the rules and regulations of the Commission promulgated thereunder.

3. The mortgage note or notes applicant proposes to issue is for a legal and proper purpose.

4. The issuance thereof will not be

contrary to the public interest and should, therefore, be authorized, subject to the terms and conditions of this order.

ORDER

The Commission *orders:*

1. Subject to other provisions of this order, the Farmers Mutual Telephone Company is hereby authorized to issue and deliver to the United States of America a mortgage note or notes not to exceed the aggregate principal amount of $1,087,000, repayable on or before thirty-five years from the date thereof, together with accrued interest on the principal amount actually advanced and unpaid, in accordance with the terms and conditions of the proposed mortgage note, and telephone loan contract herein authorized with specific reservations, under applicable laws of the state of Washington, concerning this Commission's regulatory jurisdiction with respect to applicant's rates, service, facilities, and other matters.

2. The Farmers Mutual Telephone Company is hereby authorized to execute and deliver to the United States of America, as security for the above-authorized note or notes, a mortgage on all of its properties now owned or hereafter acquired in substantially the same form and content as the proposed mortgage submitted with and made a part of the application herein.

3. The Farmers Mutual Telephone Company is hereby authorized to execute and deliver an agreement in substantially the same form and content as the agreement submitted with and made a part of the application herein and entitled, "Telephone Loan Contract dated as of August 1, 1951, between the Farmers Mutual Telephone Company and United States of America."

4. The above-authorized mortgage note or notes shall be in substantially the same form as the proposed mortgage note submitted with and made a part of the application herein, provided however, that the terms and conditions thereof shall, in no event, be construed as requiring applicant to make interest or principal payments to the United States of America except in respect to amounts actually advanced to applicant and charged against said note or notes.

5. The proceeds of the above-authorized note or notes shall be used for the purposes heretofore set forth, and no others, and not in excess of the total amounts indicated for said purposes.

6. Within thirty days after the above-authorized mortgage, telephone loan contract, and mortgage note or notes have been executed and delivered, applicant shall file a copy thereof with a certification that such documents are a true and correct copy of the originals thereof.

7. The foregoing authorization to execute and deliver the above-described mortgage note or notes, mortgage, and telephone loan contract, is without prejudice to the authority of this Commission with respect to applicant's present or future rates, service, facilities, accounts, valuations, rate of return, estimates, or determination of cost, or any matter whatsoever which may come before this Commission. Nothing in this order shall be construed as an acquiescence by this Commission in any provision of the application and exhibits submitted herein

which may be contrary to the foregoing, or as an acquiescence by this Commission in any estimate, determination of cost, or any valuation of property claimed or asserted by applicant in this proceeding or any other proceeding.

8. Prior to the beginning of any actual construction work to be financed with the proceeds of the loan evidenced by the above-authorized note or notes, applicant shall file with the Commission a copy of the detailed map to be submitted to the REA covering applicant's complete service area and the proposed construction within said area.

9. Each six months after the effective date of this order, applicant shall file with this Commission a report in writing, under oath, showing the aggregate principal amount of each mortgage note issued and delivered by authority of this order; the exact amount or amounts actually advanced to applicant and charged against said note, together with the date when interest begins to accrue on each separate advance of funds; and the disposition of the funds actually advanced in reasonable detail, with subtotals showing the total accumulated amount used for each of the purposes for which the proceeds may be used as heretofore set forth and authorized. Said reports shall continue to be filed until such time as a full accounting has been made of the entire proceeds of the note or notes herein authorized.

WISCONSIN PUBLIC SERVICE COMMISSION

Re Milwaukee Electric Railway & Transport Company

2-SR-2364,
MC-1400
October 26, 1951

APPLICATION *of transit company for authority to discontinue the sale of unlimited passes; denied but rate increase authorized.*

Service, § 489 — Presumption of efficiency of operation — Absence of proof.

1. It must be presumed in a rate proceeding that the operations of a utility are efficient and its investments prudently made, in the absence of satisfactory proof to the contrary, p. 85.

Rates, § 516 — Local transit company — Preservation of weekly pass.

2. A weekly pass feature of a local transit company's rate schedule was retained, notwithstanding the fact that the company was in need of additional revenue, where the weekly pass was the only means of recognizing a distinction between a constant or daily user and the casual or occasional rider, where revenues from the sale of weekly passes constituted over 50

per cent of total revenue, and where the benefit in time saving by retaining the pass outweighed the confusion and loss of operating efficiency which results from change-making for pennies, p. 86.

Rates, § 209.1 — Transit — Effect of extension policy.

3. The Commission may properly bear in mind, in a transit rate case, its policy of granting applications for service extensions without considering their effect on over-all earnings when they are not wholly out of proportion to benefits conferred, p. 87.

Rates, § 159 — Transit fare increase — Law of diminishing returns.

4. A transit fare increase will not be denied because of allegations that it would put into operation the law of diminishing returns, where no probative evidence is produced, since the Commission is not permitted to speculate on this matter, p. 87.

Rates, § 504 — Transit increase — Effect on traffic problems.

5. The fact that an increase in local transit rates would tend to increase the use of private automobiles and contribute greatly to the traffic congestion problems of a municipality is a factor which is not within the Commission's control and consequently one which will not be considered by it in determining a fare structure designed to fulfil the requirements of the law, p. 88.

Rates, § 125 — Ability to pay — Transit company — Economic hardship to riders.

6. The Commission is powerless to withhold a rate increase from a transit company with insufficient earnings because of the possibility that an increase might put fares beyond the reach of those who of necessity must rely upon public transportation, p. 89.

Return, § 41 — Cost of capital — Intercorporate relations.

7. The fact that a public utility satisfies its capital requirement from the assets of a parent corporation which owns all of its debt and equity capital does not prevent it from using cost of capital as a means of determining a fair return, since the cost of capital is not necessarily dependent upon the identity of the investor or his ability to supply the money, p. 90.

Return, § 41 — Insufficiency of earnings — Use of parent's funds to meet deficit.

8. The earnings of a parent company may not be used to meet the deficits of its subsidiary, p. 90.

Rates, § 639 — Test period — Duration.

9. A 2-month test period is not sufficient to establish a transit company's need for additional revenue or to test the adequacy of increased revenue anticipated under a proposed fare structure, since in using such a short period certain expenses will be accentuated either above or below the normal and it cannot be assumed that the rate of return of those two months represents a certain percentage of the annual rate, p. 90.

Expenses, § 114 — Income tax.

Statement that by decree of the United States Supreme Court income tax must be considered as an operating expense in the regulation of public utilities, p. 86.

Rates, § 516 — Transit fare structure — Weekly pass.

Statement that although the management of a transit company must be given some latitude in the choice of the type of fare structure, it will not be permitted to eliminate a weekly pass where the evidence is preponderantly in

favor of its use unless it is conclusively shown that no fare structure which includes a weekly pass feature could provide adequate revenue, p. 92.

By the COMMISSION: The Milwaukee Electric Railway and Transport Company, 940 West St. Paul avenue, Milwaukee, Milwaukee county, a common motor carrier of passengers within Milwaukee and surrounding area by streetcar, trackless trolley, and motor bus, filed an application with the Commission on June 4, 1951, for authority to discontinue the sale of all of its weekly passes, except the weekly school pass.

APPEARANCES: The Milwaukee Electric Railway and Transport Company, by Martin R. Paulsen and Van B. Wake, attorneys, Milwaukee.

In opposition: City of Milwaukee, by Walter J. Mattison, City Attorney, by Harry G. Slater, first Assistant City Attorney, Milwaukee; city of Glendale and village of River Hills, by C. R. Dineen, Attorney, and Wm. C. Dineen, Attorney (August 21st), Milwaukee; city of Wauwatosa, by (August 1st), Milton F. Burmaster, City Attorney, Wauwatosa; town of Milwaukee and town of Granville, by Lawrence G. Wickert, Milwaukee; city of South Milwaukee, by Robert E. Mullins, City Attorney, Milwaukee; town of Wauwatosa, by William Kay, Attorney, Milwaukee; city of West Allis, by George Schmus, City Attorney, West Allis; Town of Oak Creek, Milwaukee county, by (August 1st) Anthony Basile, Attorney, Milwaukee; Federated Trades Council of Milwaukee (Central Organization of A.F. of L. Unions in Milwaukee, (August 1st), by Jacob Freidrick, General Secretary, Milwaukee; Milwaukee County Industrial Union CIO (August 1st), by Fred A. Erchul, Secretary-treasurer, Milwaukee; United Electrical Radio and Machine Workers (August 1st), by John Shaffer, Milwaukee; United States Glue Workers (August 1st), by Alex Berg, Carrollville; Local 1109, Line Material Company (August 1st), by John Pisarek, Executive Board Member, South Milwaukee; Local 1111, Allen-Bradley Company (August 1st), by Eilif Johnson, Milwaukee; Wisconsin State CIO (August 1st), by William Abbott, Legislative Representative, Milwaukee; Joseph Schmidt, Alderman Seventh Ward (August 21st), Milwaukee; Local 1569, CIO, United Steel Workers, U.S.A. (Pressed Steel Tank Company), by (August 1st) Edmund A. Kaczkowski, Milwaukee; Smith Steel Workers, by Raleigh Hoover, Milwaukee; Local 248, U.A.W., CIO, Allis-Chalmers Company (August 1st), by Charles Schultz, President, Milwaukee; "Roll Back the Price Committee," by Mrs. Jerome Alberte and Mrs. John Harvey, Milwaukee; Roman Hermann (August 21st), Milwaukee; Robert J. Tadych (August 21st), Milwaukee; Greenfield Avenue Advancement Association (August 21st), by H. H. Benz, West Allis; "Save the Pass Committee" (August 21st), by Martin B. Franzkowiak, Milwaukee; 4000 Union Members in Favor of Pass (August 21st), by Edward A. Van Vlasselaer and Charles W. Wagner, Milwaukee; Smith Steel Workers 19806 (August 21st), by Arthur W. Stanley, Milwaukee; Mrs. F. E. Nicholai (August 21st), Mil-

waukee; Mrs. Elsie L. Lauscher, Milwaukee; the general public, city of Milwaukee (August 21st), by Kenneth P. Keebler, Milwaukee; George Mehringer (August 21st), Milwaukee; William Heerhold (August 21st), Milwaukee; Fred E. G. Nicolai (August 21st), Milwaukee; Michael Perko (August 21st), Milwaukee; Edward Kubal (August 21st), Milwaukee; Mrs. Joseph Brown (August 21st), Cudahy.

Of the Commission staff: Ivan A. Sherman, Supervisor, tariffs section, A. W. Larson, statistics section, and Wm. H. Damon, engineering department.

The filing of briefs was completed on October 1, 1951.

Opportunity for oral argument before members of the Commission was afforded the general public at Milwaukee on August 15th, and oral argument was held at Madison on October 2, 1951, before Chairman John C. Doerfer and Commissioners W. F. Whitney and James R. Durfee.

The application was amended at the opening hearing to propose (1) the elimination of the sale and use of all weekly passes, except the weekly school pass; and (2) the sale of 7 tickets for one dollar in lieu of 7 tickets for 90 cents. No other change is proposed in the present fare structure.

Opinion

[1] On June 4, 1951, the Milwaukee Electric Railway and Transport Company filed an application with this Commission for authorization to discontinue the sale of all of its weekly passes except the school pass. It alleged that the increase in wages and other operating expenses immediately following the order of the Commission dated March 9, 1951, 88 PUR NS 318, which granted an increase in the then prevailing fare schedule, deprived the company of the benefits of that order. It alleged further that to compel petitioner to continue to operate under such fair schedule deprives it of a right to reasonable earnings and would constitute a taking of the petitioner's property without just compensation contrary to the provisions of the Constitution of the state of Wisconsin and the United States Constitution. Its present earnings are less than 2 per cent upon the property which this company has devoted to a public use.

The company asserts that the time has come when resort should be had to a straight cash fare with increments in the zone areas. There is no serious dispute in the evidence regarding the low earnings, the operating revenues, expenses of operation, the rate base, and the heavy Federal income tax burden. This being the fourth time within the last four years that this Commission has considered applications of the company for an increase in its fares, the Commission is satisfied that its findings with respect to present net earnings, operating revenues, expenses of operation, and rate base are correct. Nor is there any hint or claim that the wage increases, the increased cost of material and supplies, and the increase in the investments of equipment were in any way imprudent or unwise. In the absence of satisfactory proof to the contrary, it must be presumed that the operations were efficient and the investments prudently made. Waukesha Gas & E. Co. v. Railroad Commission,

181 Wis 281, PUR1923E 634, 194 NW 846.

[2] The Commission is not convinced, however, that the elimination of the weekly pass is a necessary or the best method of improving the company's present earning difficulties. The Commission does recognize, however, that an increase in the cost of the weekly pass and the elimination of tickets is warranted. Accordingly, the Commission is authorizing an increase in the cost of the weekly pass from $1.60 to $2 within the single fare area and the elimination of the sale of 7 tickets for 90 cents within the single fare area as well as corresponding increases of the cost of the pass and other upward adjustments in the zone areas.

The company has presented evidence indicating that the average pass is used about 30 times per week. It has estimated that the pass is used approximately 22 times for so-called revenue rides and about 8 times for transfer privileges. An estimate by a member of the staff of this Commission indicates that the pass is used for about 17 revenue rides and 13 times for transfer privileges. Compared to the present cash fare of 15 cents per revenue ride, and the approximate 13-cent ticket fare per revenue ride, the cost to the present pass user is about 9 cents per revenue ride within the single fare area. Assuming 17 revenue rides per pass, the cost of a $2 weekly pass within the single fare area would approximate 12 cents per revenue ride. It is considered that this increase together with corresponding increases for zone fare areas will produce net revenues sufficient to enable the company to earn a reasonable rate of return upon the ascertained rate base.

Computations of several fare structures designed to save the pass do not permit the retention of the use of tickets at any price less than 15 cents. The constant or daily user of the transportation system should receive some consideration in price over the casual or occasional user. The only practical method in the instant proceeding of recognizing such distinction is to retain the pass but at an increase in price. Although a ticket user cannot be regarded as a casual or occasional rider, neither is he the main support of a mass transportation system.

Of the three forms of fare presently available, revenues from the sale of weekly passes constitute over 50 per cent of the total revenue with the remaining part being equally divided between ticket sales and cash fares. To raise the required revenues and still afford the ticket user a slight discount would necessitate an increase of the present 15-cent cash fare. The benefit in time saving by retaining the pass and cash in a convenient currency denomination outweighs the confusion and loss of operating efficiency which results by change making for pennies. In the absence of devising any fare structure designed to save the pass and not increase the cash fare, it has become necessary to eliminate all ticket sales.

Immediately after the March 9, 1951, order, *supra*, increasing fares, the company found it necessary to accede to the demands of the unions representing its employees to increase basic wages approximately $560,000 per year. The company has been confronted with increases in the cost of

materials and other operating expenses and an increase in Federal income taxes to 52 per cent of net earnings. The United States Supreme Court had decreed that income tax must be considered as an operating expense in the regulation of public utilities. The company has also increased by over $14,000,000 its investment in equipment and related facilities since 1932.

[3] This Commission is not unmindful of its somewhat liberal policy in granting numerous applications for extension of service in not fully developed territory within the expanding city of Milwaukee and suburban areas. The population of Milwaukee county has increased from 766,885 in 1940 to 871,047 in 1950. The Commission realizes that in most cases all the initial costs cannot be immediately recovered. Where the estimated costs of such extensions of service are not wholly out of proportion to the benefits conferred, the Commission does consider their effect upon the over-all earnings of the company. It is proper that the Commission bear this in mind when considering a rate case.

[4] The city of Milwaukee has contended that to increase the present fare structure in any respect would put into operation the law of diminishing returns. The same contention was made in the prior cases. No facts were submitted to support the city's contention. Admittedly, it is extremely difficult to ascertain before hand just when an increase in fares will start the operation of the law of diminishing returns. In the absence of probative evidence, the Commission can only speculate. This it is not permitted to do.

"We are not unmindful of the argument urged by counsel for the Commission that the effect of lower prices may be to swell the volume of the business, and by thus increasing revenues enhance the ultimate return. Upon the record as it comes to us, this is guesswork, and no more." West Ohio Gas Co. v. Ohio Pub. Utilities Commission (1935) 294 US 79, 79 L ed 773, 6 PUR NS 459, 462, 55 S Ct 324.

The supreme court of Wisconsin has repeatedly declared that findings "cannot rest upon mere conjecture. They must be bottomed at least upon a reasonable certainty." Marcott v. Minneapolis, St. P. & S. Ste. M. R. Co. (1911) 147 Wis 216, 133 NW 37. A transit company usually faces the threat of diminishing returns because of fewer passengers after a fare increase. It has been recently ruled, however, that within the limits of reasonable regulation the solution of such problem rests squarely upon the shoulders of private management, not with public authorities. Baltimore Transit Co. v. Hessey (1950) — Md —, 85 PUR NS 76, 75 A2d 76.

In each of the fare increases recently granted, there has been a substantial falling off of revenue rides; however, in each case the net earnings of the company have increased. The subsequent continued rise in wages, operating costs, and taxes have overtaken a substantial part of the expected improvement in earnings.

The drop in revenue passengers from 280,906,328 in 1946 to 214,477,729 in 1950 shows a reduction in riding of approximately 24 per cent. The Commission is not persuaded that this is entirely due to the respective fare increases nor that it represents an actual reduction of that magnitude.

The shift in the relative number of pass users has caused a certain amount of apparent decrease in riding that in the Commission's opinion is not a reality. The automobile has become a formidable competitor of the mass transportation system in all major cities throughout the country. The experience in the Milwaukee metropolitan area is similar, percentage wise, to that of other cities in Wisconsin and throughout the country. Since 1946, the automobile registrations in Milwaukee county have increased approximately 42 per cent.

The city of Milwaukee has undertaken to prove that automobile pool riding is very effective competition for the company and that the savings and economies that can be practiced through pool riding in the face of a rise in the fare structure will produce even greater stimulation to the expanded use of automobiles and pool riding. The city contends that if this were to happen, it would be to the detriment of the company's operating revenues. Whether this be speculation or a foreseeable development, it is merely a factor in the operation of the law of diminishing returns. For the reasons stated above, the Commission cannot give consideration to this factor at this time.

[5] The city also forceably contended that an increase in the use of the automobile will play havoc with the over-all transportation problems of a large metropolitan area. Admittedly, the competition of the automobile with mass transportation systems has created havoc upon city streets. Increased competition for the use of the streets both for movement and parking has presented serious problems both to cities and the service problems of transportation companies. The automobile has many advantages over mass transportation. It permits the carrying of a number of passengers in addition to the driver without additional cost. The automobile has no schedules to maintain. It may come and go as it pleases. Frequently the automobile and passengers can have transportation from door to door. Generally it is a faster mode of transportation and a more comfortable one.

Although it is common knowledge that the cost of automobile transportation is far in excess of equivalent mass transportation service, it does not deter a large portion of people from using their private automobiles.

But the contribution to the traffic congestion problems of the city by the automobile is a factor over which this Commission has no control. Obviously, if people do not wish to use mass transportation under any fare structure designed to fulfil the requirements of law, there is no means by which the Commission can compel them to do so.

This Commission has stated as early as 1931 (Re Milwaukee Electric R. & Light Co. PUR1931E 289, 290):

"It may prove to be cheaper in the long run, for municipalities to encourage and even to actually subsidize street railway operation than to attempt to solve the motor vehicle parking and traffic problems which are becoming increasingly acute.

. . . .

"Whatever the course of future developments affecting these utilities, it is certain that the problems they present are ones which give this Commission concern. *If a Wisconsin public utility is unable to maintain its*

credit, or if it sickens and dies, this Commission under whose supervision it has been operating during most of its life can not disclaim all responsibility for the event. . . ."

Upon appeal to the circuit court of Dane county, it said:

"The street railway system should be self-sustaining, but it has not been so for years past and is not now. No reason can be assigned for the deficiency except that the revenues have not kept pace with the necessary expenses of operation, maintenance, and extensions. There is no proof before the court that the corporation is to blame for this condition and no such contention has been made. The future holds no bright prospect in store for an increase in the revenues from the operation of the railway system. In this respect it is no exception to all street railway systems in the United States. The corporation has petitioned the Commission for redress and the main prayer is to fix such a schedule of fares as will yield a fair return upon its investment in the railway system."

These observations still hold true today.

With respect to automobile pool riding, even if cheaper than fares, this Commission cannot compel a transportation company to provide service either at a loss or inadequate return. When such competition is available such riders are given the choice of either paying fares which will provide an opportunity to earn a reasonable return or to resort to pool riding.

[6] A number of individuals known in this proceeding as "Roll Back the Price Committee" and "Save the Pass Committee" contended that to grant an increase in the price of the pass to $2 would put fares beyond the reach of those who of necessity must rely upon public transportation.

The Commission doubts that this would result. But even if the Commission were persuaded to afford such measure of relief, it is powerless to alleviate the economic plight of some riders at the expense of the company in the face of insufficient earnings. Such consideration was rejected by the court.

"The Commission is a statutory body. Its powers are limited and prescribed by the statute.

. . . .

"Nor do we find that the statute confers upon the Commission any power to relieve the economic condition of consumers by taking property away from the utility and awarding it to its patrons. What the statute authorizes the Commission to do after it has found that existing rates are unjust and unreasonable is to establish a just and reasonable rate which has been defined over and over again. If the Commission were empowered to review the whole internal economy of the state, its postulates and arguments might sustain the conclusion that it reached. Within the limits of its statutory authority, however, it had no right to give dominant weight to economic theory in the face of the statutory command." Wisconsin Teleph. Co. v. Public Service Commission (1939), 232 Wis 274, 325, 326, 30 PUR NS 65, 90, 99, 287 NW 122.

The fare structure herein authorized is estimated to produce annual net operating revenues of $2,360,000 which after deduction of Federal income

taxes of approximately $1,040,000 will leave the net return available to the company an amount approximating $1,120,000 or 6 per cent upon a rate base of $18,700,472 consisting of the depreciated book value of the property of $17,710,641 and materials and supplies of $989,831.

In Dockets 2–SR–2220, MC–1363 (Re Milwaukee Electric R. & Transport Co. [1951] 88 PUR NS 318), and in certain prior fare cases of the applicant, the Commission has considered that a return of approximately 6 per cent on the rate base is reasonable. Such rate of return is considered reasonable in this proceeding.

It is not necessary in this proceeding to enumerate the various factors considered in arriving at that rate of return since no new testimony relative to the cost of money or other factors was introduced.

[7] The city contends that the company's testimony with respect to the cost of money is based upon a hypothetical case because its capital requirements were supplied by the Wisconsin Electric Power Company which owns all of the debt and equity capital of the Transport Company.

The cost of capital is not necessarily dependent upon the identity of the investor or his ability to supply the money. The prime consideration is what earnings will attract capital.

"From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. . . . By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital." Federal Power Commission v. Hope Nat. Gas Co. (1944) 320 US 591, 603, 88 L ed 333, 51 PUR NS 193, 200, 201, 64 S Ct 281.

[8] Equally invalid is the contention made by other parties that the earnings of the Wisconsin Electric Power Company be used to meet the deficits of its subsidiary. A similar contention was rejected by the Wisconsin supreme court. See Milwaukee v. Railroad Commission, 206 Wis 339, PUR1932B 339, 240 NW 165.

[9] The applicant relied primarily upon the income account for the months of May and June, 1951, to establish the need for additional revenue and upon which to test the adequacy of the increased revenue anticipated under the proposed fare structure. There are two obvious weaknesses in this type of showing: First, in using such a short period to determine the level of costs and variation from the normal, certain expenses will be accentuated either above or below the normal. This can be especially true in certain types of seasonal maintenance which occur each year but not necessarily in the same months each year. Second, to assume that the rate of return of those two months represents a certain percentage of the annual rate is very much open to question. The actual amount for the two months of 1951 was $225,851 for depreciation and $83,011 for income taxes and net operating revenue. In that situation the percentage ratio of amounts avail-

able for return on an annual basis could vary considerably without making a very wide deviation from the average when the sum total including depreciation is considered. This has made it necessary to find other means of checking the results. Even though the final results may not differ appreciably from that based on the income account for two months, the fact remains that conclusions based on the experience of a short period of two months are open to doubts and criticisms.

An income account for the 12-month period ending June 30, 1951, was included in an exhibit of record. The annual and monthly reports for all periods subsequent to January 1, 1948, were stipulated into the record by reference. A comparison of the income account for the 12-month period ending June 30, 1951, with the annual and monthly reports has led to the conclusion that the annual operating expenses (before income taxes) which would reflect current prices and wages and the level of operations of the past year would amount to approximately $18,240,000.

The annual passenger revenue expected under the present fare structure was estimated on the basis of eleven weeks' experience, by one witness, to be approximately $18,230,000. Another witness, by stating that the revenues for May and June would be 16.46 per cent of the annual revenues, placed those revenues at approximately $18,470,000. On the basis of the five months, May-September, 1951, the Commission estimates that such annual revenues under the present fares will be approximately $18,380,000. The revenue other than passenger revenues will be considered to be the same as for the 12-month period ended June 30, 1951, or $199,000.

Using the estimated total revenue of $18,579,000 and the estimated expense of $18,240,000, a net operating revenue (before income taxes) of $339,000 would result.

A rate base of $18,700,472 would require approximately $2,164,225 to provide for a return of 6 per cent and income taxes based on 52 per cent. This would require an increase in revenues of approximately 9.93 per cent over what is estimated under the present fare structure.

In arriving at the estimated increase in revenues from the proposed fare, the applicant assumes that the amount to be received equivalent to the present pass revenues will be $1.84 for each basic pass. This same result would be achieved by the use of a $2 basic pass and assuming that there will be an 8 per cent loss in traffic because of that use. By eliminating the use of the adult city ticket and using the $2 pass with appropriate adjustment in the fares for use in the zones, it is estimated that the 9.93 per cent increase in revenue found necessary will be achieved.

It has been argued that if the price of the pass were reduced the resulting increase in the use of the pass would increase the total revenues. This argument is based on the premise that any change in the price of the pass has resulted in a change in the number of users of the pass, the number of users decreasing if the price increases and the number of users increasing if the price decreases. That such has happened can be shown on the record. However, the argument ignores any of the other factors affecting the riding hab-

its or the shifting from one type of fare to another when the relationship of price is changed. In the five months, May to September, 1951, there were 2,497,595 passes sold when the price of the basic pass was $1.60. In the five months, May to September, 1949, there were 1,938,862 passes sold when the price of the basic pass was $1.50. In other words, approximately 29 per cent more passes were used in 1951 although the total riding was less than in 1949 when the price of the pass was less.

There are two reasons why the use of the pass as a part of the fare structure is important in the Milwaukee metropolitan area. The revenue being derived from the sale of passes under the present fare structure is more than 50 per cent of the total passenger revenue. This is evidence of a widespread desire for that type of fare. The use of transfers by the cash and ticket riders is approximately 85 per cent of the rides purchased by such riders. Although the Commission is of the opinion that management must be given some latitude in the choice of the type of fare structure, the evidence in this proceeding is so preponderantly in favor of the use of the pass that approval of the elimination of the pass could not be granted unless it was conclusively shown that a fare structure including provision for the weekly pass could not provide adequate revenues. While it has been shown that the present fare structure is inadequate, there has been no attempt to show that every fare structure which includes a weekly pass would be inadequate.

The fare structure herein authorized will provide for a change in the minimum fares applicable in the suburban zones to bring them into proper relationship with the minimum fares in the single-fare area.

Findings of Evidentiary Fact

The Commission finds the essential evidentiary facts herein to be as follows:

The present fare structure of the Milwaukee Electric Railway and Transport Company was authorized by Commission order of March 9, 1951, in dockets 2–SR–2220, MC–1363, 88 PUR NS 318. This fare structure is set forth in Appendix I, attached hereto and made a part hereof [omitted herein]. Publication of the authorized fares became effective April 16, 1951, except as to the adult unlimited weekly passes which became effective April 22, 1951.

Labor costs during the last few years have increased. A wage award made on May 15, 1948, by an arbitration board increased the wages of applicant's employees by 12 cents an hour for the period January 1, 1948, to June 30, 1948, and by 14 cents an hour from July 1, 1948, to December 31, 1948, inclusive. It was estimated that this increased petitioner's operating costs in excess of $1,000,000 annually. A subsequent arbitration award granted a further increase of 6 cents an hour effective January 1, 1949, and another 6 cents an hour effective July 1, 1949, making a total increase of 12 cents per hour in 1949. On April 1, 1950, a further wage award increased the employee's hourly wages by 7 cents per hour. This latter award was estimated by the company at $456,000 annually.

Negotiations were instituted prior to the issuance of the fare order of March 9, 1951, in dockets 2 — SR —

2220, MC–1363, *supra*, which resulted in another wage increase of 8 cents an hour effective April 1, 1951. This increased the basic wage level from $1.55 to $1.63 per hour. It was estimated by the company that this would further increase its operating costs $560,000 annually. In addition to the 8 cents an hour increase, the new contract, which runs to April 1, 1952, provides for a cost-of-living increase, and contains a provision that any increase negotiated next April will be retroactive to January 1, 1952, if permitted under Federal regulations.

Operating wages paid by the applicant in 1940 were equivalent to 48.1 per cent, and in 1950, 60.6 per cent of its operating revenue. For May and June, 1951, this relationship had increased to 61.6 per cent.

The record indicates further increases in other expenses such as the cost of tires, brake shoes, and other repair parts and supplies.

A revenue estimate under the proposed fare structure was presented by the applicant, based on the eleven weeks' period from April 22 to July 7, 1951. On an annual basis, it was estimated that the elimination of all adult passes and the sale of 7 tickets for one dollar instead of 7 for 90 cents would increase passenger revenues by approximately $1,720,000, or about 9.44 per cent. An income statement for the two months ended June 30, 1951, adjusted to reflect increased revenues anticipated from the proposed change in the fare structure, and the known increases in operating expenses, indicated an annual return of 6 per cent on the company's rate base of $18,700,472. This rate base consists of $17,710,641, in depreciated book value of operating property, and $989,831 in materials and supplies on hand as of June 30, 1951.

The following statement outlines the applicant's adjusted income account under the present fare structure for the two months, May and June, 1951, as more fully set forth in an exhibit of record.

Total Operating Revenues	$3,063,827
Operating Expenses Other Than Income Taxes	2,980,816
Net Operating Revenues	$ 83,011
Income Taxes	$ 35,400
Amount Available for Return ...	$ 47,611
Total Rate Base—$18,700,472	
Rate of Return for Period	.25%

The monthly reports of the applicant to the Commission as well as exhibits of record in this proceeding, indicate a continuing downward trend in transit riding. This coincides with riding trends in other cities as indicated by national reports available to the Commission.

Findings of Ultimate Fact

The Commission finds:

1. That the Milwaukee Electric Railway and Transport Company is in need of additional revenue to meet increased operating expenses and to provide a fair rate of return.

2. That the present fare structure as set forth in Appendix I attached hereto [omitted herein] does not provide adequate revenues to meet such increased costs of operation.

3. That a reasonable and proper rate base to be used in the foreseeable future is $18,700,472, consisting of the depreciated book value of the property of $17,710,641 and materials and supplies of $989,831.

4. That the fare structure set forth in Appendix II attached hereto and made a part hereof [omitted herein] is estimated by the Commission to produce annual revenue sufficient to provide an operating ratio of approximately 90 per cent, and to provide a rate of return after income taxes of approximately 6 per cent on the rate base herein found reasonable; that such rate of return is a fair and proper rate of return on said rate base; and that fares provided in such fare structure are just and reasonable.

Conclusion of Law

The Commission therefore concludes:

That it has authority under §§ 194.-19, 195.05 (1), 195.08 (1), Statutes, to issue an order authorizing the fare structure set forth in Appendix II attached hereto [omitted herein] and that such order should be entered.

WISCONSIN PUBLIC SERVICE COMMISSION

Milwaukee Plumbing Contractors' Association

v.

City of Milwaukee

2-U-3576
August 21, 1951

COMPLAINT *against legality of procedure followed by city council in amending municipal plant rules; dismissed for want of jurisdiction.*

Commissions, § 28 — Jurisdiction over legal questions — Validity of action of municipal governing body.

1. The Commission does not have jurisdiction over a complaint against the legality of procedure followed by a city council in changing a municipal water plant's rules, since such a complaint constitutes a collateral attack upon the validity of the city council's resolution, which can be attacked only in a direct court proceeding, p. 95.

Rates, § 240 — Schedules — Effect of filing.

2. An amended municipal water plant rule which has been submitted to, and accepted for filing by, the Commission becomes a part of the lawful schedule of rates and rules which the municipal plant is bound to enforce, p. 95.

By the COMMISSION: On April 30, 1951, Milwaukee Plumbing Contractors' Association, a corporation, Milwaukee, Milwaukee county, filed a

complaint alleging in substance that the Commission is without authority to accept or approve the amendment to the rules of the city of Milwaukee as a water public utility contained in Resolution File Number 50–313, adopted by the common council of said city on April 10, 1951, which permits owners or residents to purchase approved water meters directly instead of being required to have applications made for them by master plumbers. The complaint prays that the Commission:

1. Expunge from its records the filing of the purported amendment to the rules and regulations of the Milwaukee Water Works hereinbefore referred to.

2. Expunge from its records its minutes approving the filing of the purported amendment subject to the filing of complaints.

3. Refuse to accept the purported amendment for filing and refuse to order a hearing on the purported amendment.

APPEARANCES: Milwaukee Plumbing Contractor's Association, by John A. Decker, Attorney, Milwaukee, and Charles F. Kuepper, Executive Secretary, Milwaukee; City of Milwaukee, by Walter J. Mattison, City Attorney, by William A. Ketterer, Assistant City Attorney, and Edward F. Tanghe, Superintendent, Milwaukee Waterworks, Milwaukee.

Of the Commission Staff: O. P. Deuel, rates and research department.

The amended rule was received by the Commission on April 19, 1951, and on April 25, 1951, it was accepted for filing, subject to investigation in case of complaint. A letter advising of such action was mailed to the utility on April 26, 1951.

Opinion

[1] The complaint attempts to raise the question as to the legality of the procedure followed by the city of Milwaukee as a water public utility in formulating and adopting the amendment to its rules. It is asserted on brief that it is the duty of the Commission to inquire into and pass upon the legality of such procedure. This constitutes a collateral attack upon the validity of the resolution of the common council of the city of Milwaukee, which cannot ordinarily be attacked except in a direct proceeding. McQuillin, Municipal Corporations, 3d Edition, Vol. 6, Par. 20.14.

There are perhaps situations in which the legality of municipal procedure should be inquired into by the Commission. Here, however, there is no necessity for such action. The courts are open to the complainant for a direct attack upon the validity of the resolution and if its position is there sustained the remedy before this Commission is plain.

[2] The amended rule having been submitted to and accepted for filing by the Commission, it has become a part of the lawful schedule of rates and rules which the utility is bound to enforce. (See §§ 196.19, 196.20, 196.22, 196.60, 196.61, 196.62, and 196.63.) This schedule may, therefore, be changed only (1) when the utility files an amendment thereto or (2) when the Commission enters an order, after public hearing, upon proper complaint (§ 196.26) or in a proceeding instituted by the Commission on its own motion (§ 196.28) requiring a change

in the schedule (§ 196.37). Under (2) above the issue would be whether the amended rule is in any respect unreasonable or unjust, an issue which the present complaint does not raise.

The complainant in effect asks the Commission to retrace its steps and undo that which "the moving finger writes; and, having writ, moves on:" "This the Commission cannot do except in the manner prescribed by statute as above-indicated. Cf. Baken v. Vanderwall (1944) 245 Wis 147, 150, 13 NW2d 502. No proposed amendment to the rule as filed is now before the Commission, nor is there any proceeding here on complaint, or on motion of the Commission, attacking the schedule as amended on its merits.

It follows that the complaint should be dismissed.

Findings of Fact

The Commission finds:

1. That on April 19, 1951, the Commission received from E. F. Tanghe, superintendent, Milwaukee Water Works, two certified copies of a resolution of the common council of the city of Milwaukee adopted April 10, 1951, and designated File Number 50–313, which resolution amended the rules of said city as a public water utility. The copies of the resolutions were accompanied by a letter from Mr. Tanghe, dated April 18, 1951, requesting that the Commission approve the changes in the rules set forth in said resolution.

2. That on April 25, 1951, the Commission accepted said document for filing, subject to investigation in case of complaint, as evidenced by its minutes of that date and by a letter addressed to E. F. Tanghe, superintendent, Milwaukee Water Works, signed by the secretary of the Commission and dated April 26, 1951.

Conclusion of Law

The Commission concludes:

1. That the above-described amendment to the schedule of rates and rules of the city of Milwaukee as a water public utility became effective when accepted for filing by the Commission on April 25, 1951.

2. That the Commission is without jurisdiction to grant the prayer of the complaint herein.

3. That an order dismissing the complaint should be issued.

ORDER

It is therefore *ordered:*

That the complaint herein be and hereby is dismissed.

Industrial Progress

A digest of information on new construction by privately managed utilities; similar information relating to government owned utilities; news concerning products, supplies and services offered by manufacturers; also notices of changes in personnel.

Pennsylvania Electric to Spend $26,000,000 for Expansion

PENNSYLVANIA ELECTRIC COMPANY plans to spend $26,000,000 for expansion in 1952, O. Titus, president, disclosed in a year-end statement. He said expenditures of $19,000,000 during 1951 brought to $79,000,000 the amount invested in new facilities since 1946.

The $26,000,000 figure for 1952 makes provision for continued work on the new $38,000,000 generating station at Shawville, Pennsylvania, and continued construction of a 60-mile, 220,000-volt transmission line from Shawville to Lewistown, Pennsylvania.

In the Erie, Pennsylvania, district, the company will spend approximately $8,000,000. This will include $6,000,000 for the completion of an addition to the Front street generating station.

G-E Names Cotton Manager Utility Sales, New York District

APPOINTMENT of E. R. Cotton as manager of utility sales in the General Electric Company's New York office has been announced by A. M. Wainwright, manager of the company's District Central Station Division.

Mr. Cotton fills the position vacated by Mr. Wainwright who was recently appointed to his present position.

Windows Now Built Into Slat-Type Steel Rolling Doors

AN innovation in metal rolling doors said to provide a "new look" for commercial and industrial applications while retaining the sound basic construction of this type of door, has been announced by The Kinnear Manufacturing Company of Columbus, Ohio.

Narrow, transparent panes of heavy-duty plastic are now available in one or more of the interlocking steel slats of these Kinnear doors that coil upward above the lintel. This fenestration in the door closure is reported to offer new benefits applicable to many different sites where more interior light is required or vision to the outside is desirable.

The "window slats" at or near eye level permit anyone inside a building to see who is on the outside of the door before opening it. Also, they allow entry of daylight through the door when it is closed. This new feature is a supplement to basic construction principles for the interlocking slats originally conceived by Kinnear over a half-century ago.

With industry of all kinds faced by steadily rising expenses of operation, it is reported that metal rolling doors offer a means of saving on labor, heat, and air-conditioning costs.

Kinnear Rolling Doors are constructed of open-hearth steel interlocking slats, heavily galvanized, and equipped with end-locks that maintain alignment. The resilient slats resist damaging effects of horizontal and vertical forces. The metal curtain travels in steel guides and coils upon a barrel journaled in heavy-duty brackets. Counter-balancing is provided by helical springs enclosed in the barrel. A metal hood covers both barrel and coil.

Many of these doors, according to company records, have been in daily use with minimum maintenance for more than 30 years.

New Delta-Star Bulletin on Outdoor Hook Operated Switches

A NEW 6 page illustrated bulletin (5104) describes Delta-Star's "B-2K" hook operated disconnecting switches with an improved arrangement of high pressure silver to copper contacts, a new hard drawn copper tubular blade and an over-all design providing superior electrical and mechanical characteristics. Complete technical data are furnished in tabular form.

Copies of the bulletin may be obtained from Delta-Star Electric Company, 2437 Fulton street, Chicago 12, Illinois.

Louisville Gas & Elec. Program To Cost $16,000,000

THE LOUISVILLE GAS & ELECTRIC COMPANY estimates that its 1952-1953 construction program will require expenditures of approximately $16,000,000 in 1953.

Included in these estimates are the following:

Approximately $6,300,000 for the completion (scheduled for operation in October, 1952) of Unit No. 6 (65,000 kilowatt) and accessory equipment at Paddy's Run generating station, and approximately $10,000,000 (about two-thirds the estimated cost) for Unit No. 1

(*Continued on page 26*)

(100,000 kilowatt) and accessory equipment at Cane Run generating station to be located on the Ohio river.

The balance embraces principally extensions and improvements to electric transmission, distribution, and substation facilities and extensions and improvements to gas transmission, storage and distribution properties.

Bell Telephone of Pa. to Spend $247,000,000 in Three Years

BELL TELEPHONE COMPANY of Pennsylvania recently announced that its construction program for the next three years calls for expenditure of $247,000,000, of which $81,700,000 will be spent in 1952. W. D. Gillen, president, said this is a new high in the company's history.

Mr. Gillen said since 1946 the company's total plant investment increased by nearly $273,000,000. Plant investment for each telephone in service at the close of 1951 stood at $233. However, because of high construction costs, it is estimated each telephone added during the next three years will require $519 in net additions to plant.

B&W Tubular Products Offers Booklet on Tubing Failures

THE many factors affecting tube life in high-pressure, high-temperature applications are presented in a 40-page booklet published by the tubular products division of The Babcock & Wilcox Company. The booklet, TR 516, presents the results of a great number of investigations of failures of carbon steel, intermediate chromium-molybdenum alloy steel, and stainless steel tubing in boilers, cracking stills, heaters, and heat exchangers during service at elevated temperatures and pressures in the power, oil, and chemical processing fields.

Copies of the booklet are available from division office at Beaver Falls, Pa.

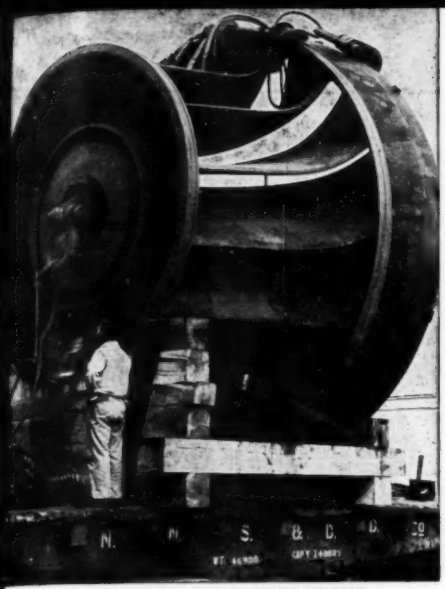
G-E Issues Bulletin on Ways I-50 Meters Reduce Expenses

AN illustrated, 16-page bulletin, "10 Ways That I-50 Watthour Meters Reduce Operating Expenses," has just been announced as available from the General Electric Company, Schenectady 5, New York.

Designated as bulletin GEA-5727, the publication outlines possible savings that can be realized through use of factory-certified G-E I-50 watthour meters. The estimated savings —up to $2.00 for each meter—are based on studies of the meters' characteristics, construction, design, and operation.

Washington Gas Light Plans For Expansion

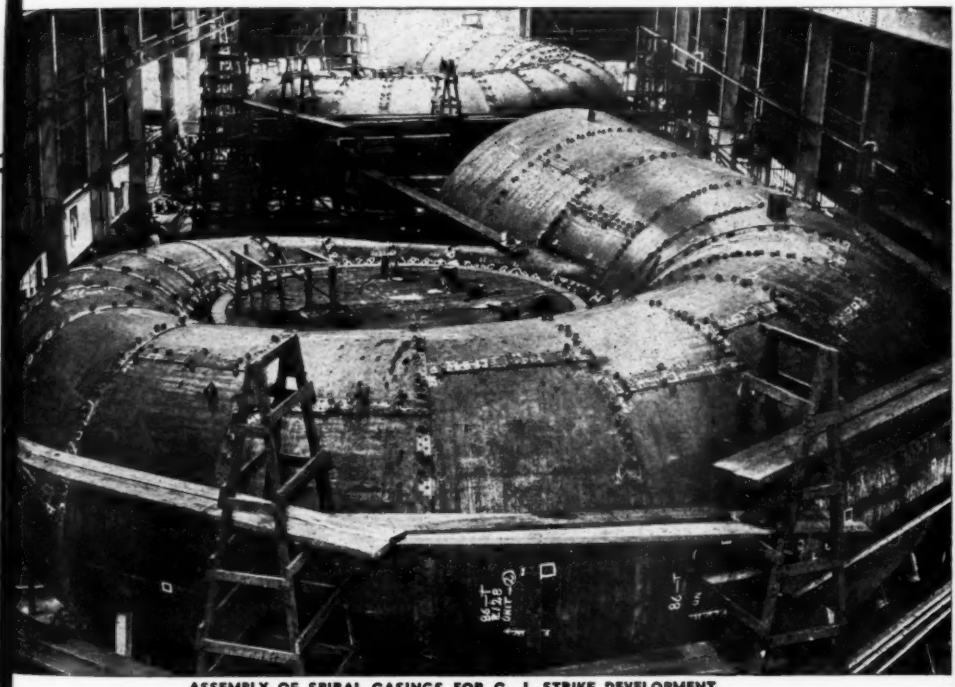
WASHINGTON GAS LIGHT COMPANY has announced its expansion plans for 1952. It is estimated that total expenditures will approximate $6,000,000.



RUNNER FOR BUGGS ISLAND DEVELOPMENT

OVER EIGHT MILLION HORSEPOWER

The Newport News Shipbuilding and Dry Dock Company has received orders for the building of hydraulic turbines aggregating output of 8,150,000 horsepower.



ASSEMBLY OF SPIRAL CASINGS FOR C. J. STRIKE DEVELOPMENT

NEWPORT NEWS

SHIPBUILDING AND DRY DOCK COMPANY

Newport News, Virginia

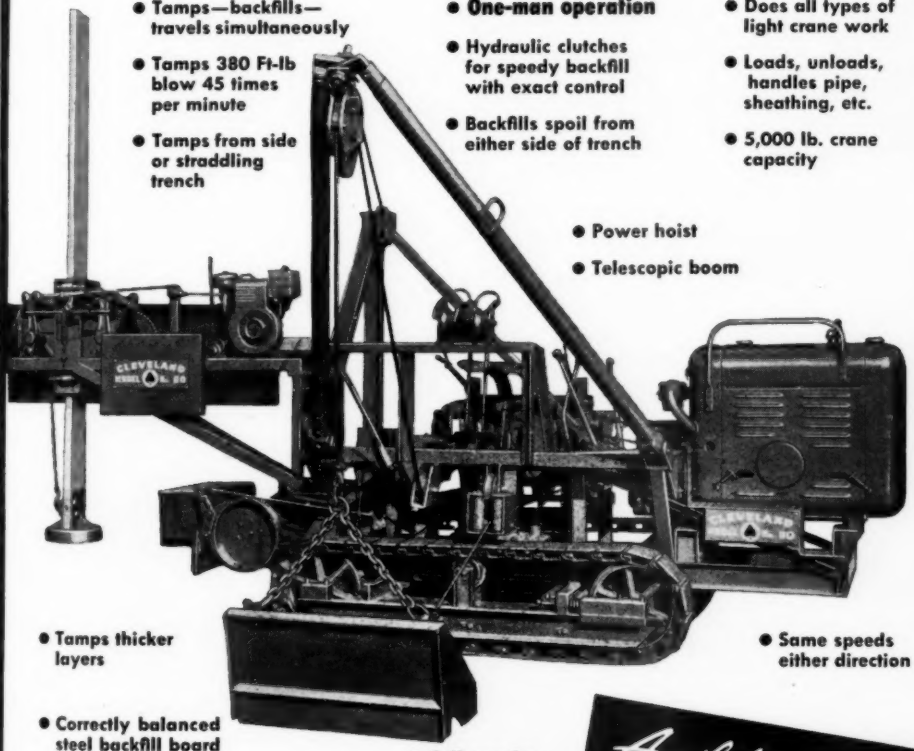
NOW...do all three trench-completion jobs with one machine

CLEVELAND MODEL 80

the only machine of its kind!

IT TAMPS! IT BACKFILLS! IT LAYS PIPE!

- Tamps—backfills—travels simultaneously
- Tamps 380 Ft-lb blow 45 times per minute
- Tamps from side or straddling trench
- **One-man operation**
- Hydraulic clutches for speedy backfill with exact control
- Backfills spoil from either side of trench
- Does all types of light crane work
- Loads, unloads, handles pipe, sheathing, etc.
- 5,000 lb. crane capacity
- Power hoist
- Telescopic boom



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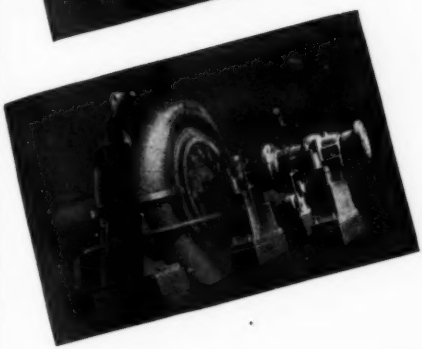

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PROFESSIONAL DIRECTORY (*continued*)

PROFESSIONAL DIRECTORY (continued)

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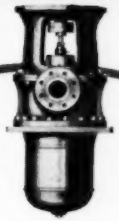

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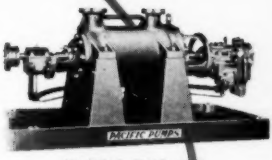

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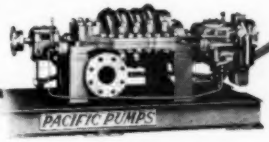

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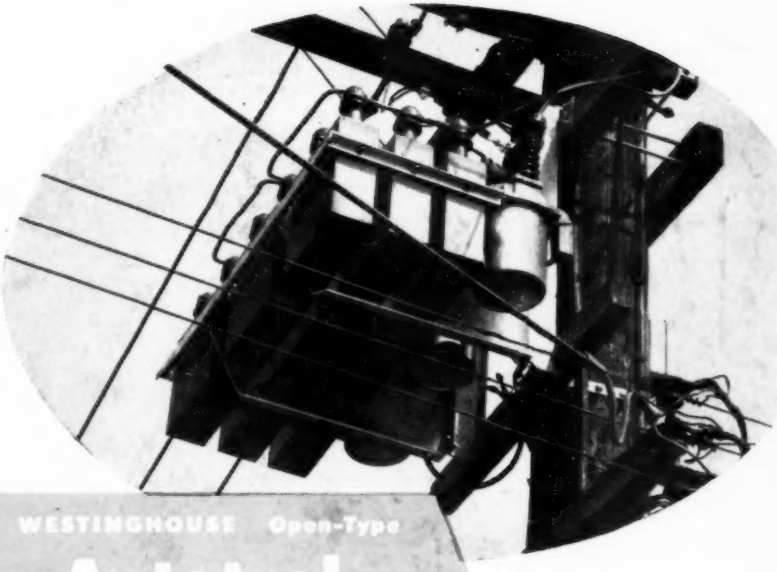

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